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# LATERAL CURVATURES OF THE SPINE.

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The large amount of study which has been given to the subject of lateral curvatures of the spine, has been chiefly directed to the mechanical problem of how, under given predisposing conditions, active forces are applied to produce the characteristic deformity, with the end in view of basing on its solution a rational therapeusis.

Many theories have been advanced to account for the clinical phenomena, most of which are to-day mere curiosities, while some contain more or less truth. However, be it said, the matter is still not completely settled. Hoffa, in his Orthopedic Surgery, following Lorenz, designates a number of these theories as having only historical interest; viz., the breathing theories of Stromeyer and Werner, according to which primary dorsal scoliosis is caused by increased action of the serratus magnus muscle on one side; the theory of Delpêch, Boyer, and Guérin of the active contraction of the longitudinal muscles of the concave side which led to the therapeutic error of myotomy; the theory of Malgaigne of contracted bands; Hueter's theory of unequal growth of the bones; Lorinser's theory of diffuse, insidious inflammation of the bones, causing the patient instinctively to assume a posture protecting the softened parts, and finally the theory of Eulenburg of a primary interference with the normal antagonism of the muscles of the back.

To sufficiently explain the phenomenon of torsion of the vertebræ at the site of the curvature is the chief stumbling block of these theories, but besides this they fail to explain other clinical phenomena. To Roser and Volkman belongs the credit of suggesting the theory which is to-day considered most in accord with the facts, viz: the theory of improper distribution of the weight of the body on the spinal column, there being presupposed a condition of depressed vitality or lack of resistance on the part of the column to these forces.

That there often occurs such a condition, favoring yielding of the bones, is attested by the frequent association of other bone deformities with scoliosis. This is strikingly illustrated by the statistics presented by Heussner in the twenty-first German Surgical Congress, 1892, in which 283 cases of flat-foot were reported, 167, or more than one-half of which had marked scoliosis; moreover, in 65 children with flat-foot, 24 had scoliosis. The proportion of cases of knock-knees and bow-legs in which scoliosis was present, is even greater. Attention should also be directed to the fact that ossification takes place slower in the bodies of the vertebræ than in most other bones of the body, the process not being completed till the thirtieth year.

Roser called attention to the fact that the column of bodies of the vertebræ is especially suited to resist compression—it is the only part of the trunk which resists the vertically compressive force of the weight of the upper part of the body—while the posterior part of the spinal column, the series of processes connected together by ligaments, offers little or no resistance to compression, but strongly resists extension. If, now, we imagine a purely lateral flexion to be produced, there will be, of course, compression on the side of the concavity. The bodies of the vertebræ being anterior to the centre of motion, strongly resist this compression and develop a twisting moment about the vertical axis which meets no opposing moment from the compressible column of processes behind. In like manner, on the side of convexity, the ligaments joining the various processes, all of which are posterior to the centre of motion, being made tense by the lateral flexion, produce another twisting moment in the same direction. The muscles on the side of the convexity, especially those attached to the transverse processes, have a powerful leverage in increasing this twisting moment, and from the fact that in paralytic scoliosis there is seldom any torsion, it is more than probable they play a greater role than is generally accredited to them. These twisting forces, acting through a considerable length of time are sufficient to produce in the yielding bones the changes characteristic of the rotation.

Bradford and Lovett have made a number of experiments on the cadaver to determine the amount of relative motion possible to the component parts of the spinal column, and they show that the degree of torsion permitted is small, especially in the dorsal region so that in cases of scoliosis with marked torsion, the deformity consists more of change of form of the vertebræ than of change of position.

Lorenz has shown that on the bodies of the twisted vertebræ there are spiral striations in place of the vertical ones noted on the normal bones, which again points to an actual twisting of the vertebræ themselves. Hence it is not to be expected that any form of manipulation or attempt at forcible correction of the deformity will bear favorable results in a short time, for the condition is not that of luxation. The spinal column must be coaxed into better form by persistent efforts at correction extending over a long period of time; in fact, it must be taught to grow straight.

As regards clinical varieties of scoliosis, the most common, as well as the most interesting, is the so-called habitual scoliosis, generally found in the dorsal region, most often with the convexity to the right, and in the vast majority of cases due to continued mal-position in school. It occurs chiefly between the seventh and fifteenth years. The so-called statical scoliosis is really a variety of this, due to tilting of the pelvis from shortening of one leg, differing from it chiefly in the fact that the primary curve is in the lumbar region.

Scoliosis occurs, according to Guérin, in about 10 per cent. of rachitic children, and Eulenburg has shown from study of 500 cases of rachitic scoliosis that 80 per cent. of the cases occur between the ages of one and three. As would be expected from the etiology the curvature involves a large number of vertebræ, a so-called total scoliosis, with the point of maximum deviation near the middle of the vertebral column. There is generally marked rotation, and, which is also unfavorable in prognosis, the deformity becomes fixed early in the history of the case.

In scoliosis due to paralysis of the muscles of the back, as in poliomyelitis, the convexity is directed to the sound side, not because of the shortening of the paralyzed muscles, but from the fact that the child assumes a position, according to Bradford and Lovett, in which the least stress is laid upon them. According to an interesting article on paralytic scoliosis by Messner, in the *Centralblatt für Chirurgie*, 1892, No. 44, in which eight cases are reported, this form of curvature does not tend to become fixed, at least not till long after the trouble began, which fact makes the prognosis far better than in other forms of scoliosis, and besides here torsion does not occur. However, Messner lays stress on the formation of contractures as the cause of the deformity, a notion which is hardly reconcilable with his other facts of the late fixation and favorable prognosis. Messner advises testing the reactions of the muscles to the electric current for purposes of diagnosis.

Other clinical forms of scoliosis deserving mention are the empyematic, following protracted empyema and due to fixation of the ribs at a lower angle than the normal; and the so-called neuro-muscular scoliosis, which occurs when sciatica involves the lumbar nerves and their branches in the muscles of the back. The muscles are instinctively relaxed to avoid painful pressure on these nerves which causes a moderate degree of scoliosis, with the convexity directed to the diseased side. As almost every deformity due to perverted muscular action will be found duplicated in cases of hysteria, so occasionally marked lateral deviation of the spine of this nature will be observed in such patients.

There is little to be said on the subject of prophylaxis against lateral curvatures of the spine, though from a practical standpoint, it is of supreme importance. Since the active factor in the production of the deformity is habitual maintenance of faulty posture, nine-tenths of effective prophylaxis is embodied in persistent correction of posture. It is easy to make such a rule, for the indication is plain, but to carry it out successfully in those predisposed to the deformity requires an amount of care on the part of parents and teachers that few have the persistence to give; still there is this to be said, that with proper care in most cases of incipient scoliosis further development of deformity can be prevented, and the curvature already present greatly modified without the use of mechanical appliances. Of course the general health must be kept at the highest state possible, and systematic and reasonable muscular exercise taken.

In scoliosis due to rachitis the indications are at once evident, and, it may be added, they are the same as the indications for rachitic kyphosis, which, identical with it pathologically, differs only in the direction of the curvature. Mild cases need little treatment other than proper nutritive measures, with frequent manual correction of posture, but in cases in which the deformity is severe, or shows a tendency to increase, more active measures are necessary.

If the case is seen early enough, *i. e.*, before the curvature has been fixed, much can be done by mechanical means toward correction of the deformity, but it must be remembered that scoliosis of this nature develops rapidly and becomes fixed early. The chest should each day be molded into better form by manual pressure, combined with extension, and in the intervals the correct form should be maintained by some mechanical appliance. Since these children are young, the majority being under three years of age, a corset is not suitable, because of the large abdomen and small hips. At once the most effective and comfortable and convenient piece of apparatus for this purpose is the wire cuirass of Sayre, or the less expensive portable bed devised by Phelps, of New York, which latter has the advantage that it can be made by anyone and anywhere.

Its construction is simple: The child is laid on a pine board one-half to three-fourths of an inch thick, with legs slightly apart, and his profile marked out on the board with a pencil. The board is sawn out on this line and the upper surface upholstered with cotton, hemp, or hair, and covered with muslin. The child, now wrapped in cotton or lint or canton flannel, is laid on the board and enveloped, baby, board, and all, with plaster of Paris bandages, from the ankles to the axillæ. When set, the plaster is cut from the anterior surface and the child lifted out, or which is more easily done and is almost necessary when the apparatus is used in a case of Pott's disease, the baby is turned over on its face on a pillow and the bed lifted off it. The free borders of the plaster sides remaining, are then bound with some convenient material, rubber adhesive plaster answering well, and, to prevent the plaster of Paris slipping from the wood, it is secured by a few tacks driven through it into the edges of the board. The child should be kept in the apparatus most of the time till the tendency to curvature is quite overcome, being taken out once or twice daily for general massage by way of exercise.

The methods of treatment of typical lateral curvature, *i. e.*, habitual scoliosis, have in the last few years undergone manifold changes, according as one or another theory of causation has held sway: Guérin divided the muscles on the concave side, while Volkman and Malgaigne cut ligamentous bands, but to-day all operative procedures are discarded, with the possible exception of particular cases. When it was suggested that the proximal cause of the curvature is the superincumbent weight, it was most natural to relieve it by putting the patient to bed, but this has the serious disadvantage that it prevents proper nutrition. Support was tried with rigid corsets, and swathes passed round the body to press on the convexities, and with only indifferent success.

Beyond the use of tonic measures, however, the treatment must be essentially mechanical, and in that these cases with torsion present a problem of great complexity.

In general, the indications for mechanical treatment of scoliosis are: (1) Prevention of increase of the deformity. (2) Correction of the deformity present. (3) Maintenance of the correct form.

To prevent further development of the deformity, the causes still active must be removed or annulled; *i. e.*, the general health must be brought to the highest state possible and the superincumbent weight made to so fall on the spinal column as to have no unresisted component in the direction of the deformity. The first is a question of nutrition, and should receive special attention; the second, one purely of mechanics. Bradford and Lovett enumerate three modes by which the effect of the weight may be controlled: (1) Removal of the superincumbent weight. (2) Strengthening the weakened muscles, that they may resist the deviating forces. (3) Preventing the spinal column from being held out of line. Recumbency is the most effective way of removing the weight, and is of practical value when limited to occasional use so that the muscles have sufficient exercise. With this same limitation suspension is also of value.

The question of strengthening the spinal muscles presents some interesting clinical facts. As mentioned by Bradford and Lovett, it is rare to find any disturbance in muscular apparatus of the back in early stages of scoliosis, the shortening and weakening occurring later being fully accounted for by accommodative contraction, on the one hand, and yielding to overstretching, on the other. To restore equality of muscular action it is most difficult to carry out gymnastic exercises such that the weakened groups of muscles will be developed more than others. Accordingly, massage and electricity, whose effects can be better localized, should have place in the treatment. The gymnastic exercises advised by Sayre, and Roth of London, when properly selected and carried out, are of very great value.

Rapid correction of lateral curvature is out of the question, save in cases where little resistance is offered; recent cases, mostly due to poliomyelitis, anatomically due to increase of the normal relative mobility of vertebræ. For the most part, correction must be gradual, and the greatest care must be exercised to hold fast every point of improvement gained. For the limited number of cases due to tilting of the pelvis from shortening of one leg, the so-called statical scoliosis, the oblique seat of Volkman is beneficial; but in other cases the principle involved in it cannot be taken advantage of because of the generally unfavorable position of the curvature.

A great number of procedures have been devised looking toward the forcible correction of these curvatures. Simple lateral deviation is easily managed; but how to untwist the spinal column presenting marked rotation! Pressure on the long diameter of the thoracic ellipse has some effect, but it is small; fixing the pelvis in a clamp and removing weight by suspension, the trunk may be somewhat untwisted by manual pressure, as is done by Schede and others. Simple extension has, to a certain extent, effect in reducing lateral deviation; but from the direction of the force thus applied, only a small component of it is active in reducing torsion. Then, there are the multitude of slings, bands, beds and inclined planes, with bands for lateral pressure, but none are very successful.

None of these methods takes much account of the anatomical relations to which the torsion is chiefly due, or to the mechanical conditions presented by the twisted column. It is to be noted that the column of bodies of the vertebræ which, as has been said, alone offers resistance to vertical compressive forces, is deviated to one side, to the right, for example, in scoliosis dextra, so that the line of gravity falls nearer the opposite side; *i. e.*, to the left and more posteriorly than normally, even to such an extent, in some cases, that the anterior and right sides of the bodies are entirely relieved of compression and are called upon to exercise resistance to tension instead. If now the trunk be bent forward, the resisting line of bodies is pressed still more to the right, and rotation is increased. Bending to the right side, in severe cases, merely compresses the bodies a little more, without tending to throw them into better line. Backward flexion, however, throws the line of centres of motion farther back and to the right, relieving from compression the greater part of the bodies, and permitting the tensile force, which takes its place, to pull the anterior edges of the bodies in the direction of least resistance. If rotary deviation is great, this is directly backward, which will increase the deformity; but if it is slight, it will tend to correct it.

In the severe cases, by combining with backward flexion, rotation of the trunk and flexion to the side of the convexity, care being taken that the forces are exercised most strongly at the points of maximum deviation, considerable pressure can be brought to bear on the twisted column in such wise as to untwist it. This is the rationale of the manipulation devised by Lorenz. He gradually flexes the region of curvature backward over a padded roller, which may be held in an upright frame or be attached to the end of a board, on which the patient lies, with the convexity resting on the roller, as figured by Bradford and Lovett. The attendant may now rotate the upper part of the trunk, flexing to the side of convexity, at the same time moulding the chest by pressure on its long horizontal axis. The procedure is really analogous to the rotary methods of reducing luxation of the hip and shoulder: the ligaments which strongly resist tension are relaxed, and force is applied which tends to rotate the rigid parts into proper position. It should be practised daily and persistently, till it be determined with certainty that further improvement is out of the question.

Coming now to the third indication; viz , maintenance of correct form, there is great divergence of opinion as to the means to be employed in bringing this end about. An infinite variety of braces, swathes and corsets have been invented for the purpose, making use of nearly every imaginable material, springs, rubber bands, leather straps, steel bars, shellacked felt, beaten brass, papier mache, etc., etc., the vast majority of which are of little value, for they neither keep their positions nor maintain their shapes, even if for a time they give support.

When the gypsum corset was devised it was thought to be just the thing, but though it preserved the form well, when worn any length of time, like the other braces it caused weakness and atrophy of the muscles of the back from disuse to such an extent that soon after its removal the curvature was as bad as before. Nevertheless the gypsum corset, properly made, so that it can be removed that systematic exercise may be taken, is the most effective and most comfortable of the spinal supports. It is generally better to put on the corset with the patient swung in Sayre's suspension apparatus—perhaps with the pelvis fixed in a frame to prevent its rotating, correcting pressure being applied to the projecting ribs while the plaster is setting. Barwell has made the corset with the patient sitting, while correcting forces were applied laterally by means of tense bands, some of which were incorporated in the plaster of Paris.

Before the plaster is set it should be moulded with the hands so that it takes firm hold on the buttocks, and should be set in on the flank and compressed over the convexities. The region over the scapula on the side of the concavity may often, with advantage, be cut away with the knife.

It is a matter of considerable moment to decide at what stage of the deformity artificial supporting apparatus is really indicated, for all such aids have the serious drawback of preventing development of muscles, whose good tone is necessary to make support of the column continuous and automatic. It is easy to say when called upon for an opinion: "This is a case of scoliosis; put on a plaster corset." Many a case would have been better off without. Phelps, of New York, has devised an empirical rule for his practice; viz., if the line of spines deviates more than one-half the diameter of the body of a vertebra, a mechanical support should be worn. His reasoning is that the line of gravity then falls without the base and the superincumbent weight tends to increase the deformity. If there were no torsion this would be literally true, but with torsion, the deviation of the line of spines is not even an approximate measure of the real curvature. Still, it is a good rule, practically, if it be made somewhat elastic to allow for torsion, *i. e.*, with marked torsion a support should be put on when the deviation of the line of spines is less than this. In any case, such supporting apparatus should be removed at least twice daily for corrective manipulation and gymnastic exercise.

In cases of scoliosis which have resisted corrective treatment for so long a time that it is evident that nothing more can be done in that way, if such cases require a spinal support, a more permanent corset than the gypsum and one which preserves all the advantages of the latter, the wood corset, can be applied with satisfaction. This appliance was devised by Waltuch, of Odessa, and has been modified and improved by Phelps, of New York, so that, as now made, it is probably the most perfect spinal support we have.

Its construction is not difficult, but requires some skill and judgment in the use of the glue-pot, for the material of which the corset is made, spruce shavings, is held together with a good quality of glue. An ordinary gypsum corset is made with the patient in suspension and after removal is reinforced with several turns of plaster bandages. When dry, the interior is thoroughly lubricated with vaseline and plaster of Paris, in which picked oakum is mixed is pressed, while wet, on all sides to the thickness of one and a half to two inches. When this is set the mould is removed, leaving a positive reproduction of the trunk. With an ordinary carpenter's draw-knife, inordinate prominences, such as that of the protruding ribs, are shaved off and with fresh plaster corresponding hollows are filled. Thus when the wood corset is made on this matrix, it will, to a certain extent, tend to correct the deformity, an effect which may in this manner be intelligently directed.

When thoroughly dry the form is covered with a piece of stout, unbleached linen, stretched on wet and sewn in the middle line in front and fastened at the ends with tacks. As soon as the linen is dry enough to take the glue, the shavings are put on in horizontal, oblique, and vertical layers, with linen between, and the whole is covered with linen. When thoroughly dry, the corset is split down the middle line in front, punched with numerous holes, say at every inch or inch and a half, in each of which a shoemaker's eyelet is fixed, permitting of exit of the perspiration, and the whole covered inside and out with a good coat of shellac to prevent softening of the glue by the perspiration. The corset is now trimmed and is ready to be worn.

An example of such a corset is here presented to the Society for examination [apparatus exhibited]. It is light, it is strong and porous, it fits accurately, and it retains its form.

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## THE FEEDING AND WEANING OF INFANTS.

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*Read before the California Northern District Medical Society.*

The subject of "infant feeding and weaning" seems to be one seldom written upon or discussed by local medical societies, and yet it occurs to me as being one of vast importance. Important, because upon the proper feeding and management of babies, depends, in a large measure, the future hope and welfare of our country. Thousands of infants are sacrificed annually because of improper feeding and management, more especially during the summer season. Among this number, for aught we know, may be future presidents, governors, senators, congressmen, ministers, railroad directors, and even, possibly, doctors. Of this classification it is barely possible that presidents, senators and congressmen are, in some instances, no very serious loss, if we are to judge from the condition of things at present. But I find myself digressing.

It is a melancholy fact, yet true, nevertheless, that a very large number of mothers do not know how to properly feed their babies. We, as medical men, should instruct them as far as possible. Scientific research has settled beyond question that nothing compares with breast feeding. The superiority of a healthy mother's milk is a scientific truth. On the other hand, the opinions expressed regarding artificial feeding are so diverse and so opposed to one another that it is evident that much that has been taught must be unlearned, or rather admitted to be untrue, before we can expect to make any intelligent advance in this most difficult subject.

The great number of artificial foods used by physicians, according to the fashions of the day, only proves that bottle feeding has not yet arrived at that state of perfection where it can compete with breast feeding. The difficulty in approaching the study of the subject has been in the methods which, with physicians as a class, has been too purely from a clinical standpoint. We know, for instance, how easily we may be misled by the apparently good effects of a medicament, where, perhaps, on further investigation, we find, or in the light of some new discovery we learn, that the improvement in the case was not due to the drug, but rather to circumstances entirely apart. This equally applies to many foods and methods of feeding. The feeding problem is one which is hedged about with many difficulties on account of the great diversity of individual circumstances and idiosyncrasies.

Dr. T. M. Rotch says: "Certain infants, for instance, may thrive on peculiar mixtures not adapted to infants as a class. Many will not thrive on that food which nature has provided, and the well-being of an infant will depend much on the circumstances by which it is surrounded, such as affluence or poverty, country or city life. In those cases where, for one reason or another, human milk is not available, the question of feeding is this: What may be given to take the place of nature's food? In supplying a substitute, we should copy in every possible way the physical and chemical characteristics of the food which is universally acknowledged to be the best. In our endeavor to copy nature, we may hope that, as our scientific knowledge advances, more and more light will be thrown upon those points, which are now obscured by ignorance. The recent discoveries in bacteriology, for instance, throw light on the reason for the old and well-deserved popularity of boiled milk in digestive disturbances, and plainly point out to us that had we in the past better understood the significance of the sterility of breast milk we should have made more rapid advances in the management of the infants' diet."

How much food does a child require in twenty-four hours? So much depends on the infant; if the bowels be normal and there is no evidence of indigestion, the breath sweet, and the child seems desirous for more, there is no reason why it should not be satisfied. Dr. John M. Keating says: "A child of a month should be nursed about ten times in twenty-four hours, every two hours during the day and every three hours at night. At each nursing it should take from two to three ounces of milk; at the age of three months it will probably only nurse about eight times, taking about six ounces at each feeding; at the end of six months it will take about eight ounces." I believe that this would represent about the amount of breast milk that such a child would receive. The child gets the same food as does an adult; that is to say, the milk which forms its diet is composed of all the articles of food that enter into the diet of a human being. These may be divided into five classes: water, casein, or albuminoids; salts, which go to the formation of bones and secretions; fats and sugar, which are burned up to make animal heat and are also valuable in nutrition.

A healthy infant, if properly instructed in the earlier hours of life, will awaken almost with the regularity of clock-work and seek its meal every two hours. It should be placed to the breasts alternately, and when it has received its nourishment it is almost sure to fall into a quiet sleep, showing no evidence of indigestion or flatulence, so frequently noticed in bottle-fed children. Babies are very prone to get into the bad habit of falling asleep after taking two or three mouthfuls. In this case the infant should be promptly awakened and made to continue the meal until it has taken a sufficient amount.

The question is often asked, How long should a child be nursed? The almost universal opinion of our best authors is: For at least six months the child should take nothing but mother's milk; but if it is pale and weak from difficult labor, or otherwise, it should be kept at the breast very much longer. Should a summer intervene, as it would for a child born in October or November, no attempt should be made at weaning, unless advised by the family physician, until the following autumn. After the age of six months, all things being equal and the child being in a healthy condition, it may be wise to gradually enlarge the bill of fare, in order to accustom it to a change of diet.

When it is deemed proper to substitute breast milk, the bottle should be given in day time, after the morning bath; or, better still, if a nurse has the child, give it the breast in the day time so that the mother may obtain her rest at night. By this time the child takes, as we have noticed, more food at each nursing and nurses less frequently, and it could have a bottle at about ten o'clock at night when the mother retires. This brings me to the subject of bottle-feeding

The question of obtaining pure cow's milk as a basis for bottle food is important. From actual experience I would say never use milk for the child from a cow fed on alfalfa hay or swill. Such writers as Leeds, Smith, Meigs, Jacobi and others of this country, have impressed upon the community the fact that the raising of children by the bottle is by no means as difficult a matter as it was twelve or fifteen years ago. Dr. Keating says: "A child that is not exposed to the dangers of a large city in the summer time can be brought up on the bottle from the day of its birth and be free from disease and become strong and healthy, provided the same attention is given to it as would be given by a mother to her new-born nursing babe."

The fresher the milk the more readily it will be digested; the warm milk just from the cow is far more digestible than that which has been kept with every precaution for a few hours. Warm milk from the cow is but slightly acid or neutral in its action to litmus paper, but after it has stood for awhile shows a very decided acid change. Mother's milk is always alkaline.

After first being sure that we have a pure fresh milk for a base, we will proceed to speak of the nursing bottle and its preparation; however, if we are not entirely sure of having a pure fresh cow's milk we should resort to some reliable brand of condensed milk. Dr. W. Thornton Parker, of Rhode Island, says: "Always procure a pure gum nipple, with two holes as far apart as possible," as the best for a nursing bottle. He also says: "When there is only one hole in the nipple the infant in nursing compresses the nipple and sends the milk in a stream in such a manner as to strangle itself. Milk coming through one hole is not as comfortable as when it comes through two, and the effort of nursing becomes disagreeable to the child." A black nipple is certainly the best to use, and there should be a number of them, so that a clean one, that has been well washed, can be used each time. The best way to nurse an infant is by holding it in the arms and giving it the bottle in the same position and height as if it were really nursing the mother. When it has finished nursing the bottle should be immediately removed and cleansed; never should the bottle be left in the infant's care to use at will.

"We acknowledge," says Dr. Keating, "that cow's milk has the following advantages: It serves as a basis for the preparation of the milk, resembling closely that of the human mother; it possesses all the ingredients that are necessary for nutrition; it is easy to obtain. Its disadvantages are, that the relative proportions existing between its different constituents is not that found in mother's milk; it possesses a form of casein, which forms hard curds. This casein exists in larger amounts —at least twice or more—than in human milk. Cow's milk should be obtained from the dairy, as fresh as possible. Mix one-half pint of this milk and a half pint of pure water, and to this should be added about two hundred grains of milk sugar with about four grains of pure bicarbonate of soda. It should then be brought to a boil, after which two tablespoonsful of cream should be stirred in and it is ready for use, to be given by bottle and at about the temperature of 98° to 100°." We have here a mixture, according to Dr. Leeds, very closely resembling mother's milk. We have also a preparation which has been freed, by boiling, from the objections stated to cow's milk—that due to a tendency to fermentation, and, indeed, it is rendered more digestible by it. For new-born children, or those a month or two old, we may diminish the amount of casein and increase the amount of sugar by the following means: take one ounce of ordinary milk, three ounces of water, add one ounce of ordinary cream and about eight grains of milk sugar.

It is better to run the risk of making the mixture with too little casein than with too much, gradually increasing the strength of the milk by diminishing the water as the child grows older; but it should also be borne in mind that as we increase the water we should also increase the carbo-hydrates by adding either sugar or milk or malted food. Sugar of milk rapidly sours and turns to lactic acid when dissolved in water, and, indeed, I believe that on this account there is little choice between it and cane sugar. In a case of diarrhea I would leave out sugar altogether. My own experience teaches me that with care, cane sugar has not the disadvantages in most cases in winter that some fear.

Dr. Thornton Parker says: "The best method of preparing the milk for the bottle is as follows: for a child three months old take pure milk one gill, boiling water one-half pint, lime water one tablespoonful, sugar of milk one teaspoonful; mix carefully; each bottle should be tasted to see that there is nothing wrong with it, and also to see that it draws well through the nipple."

When a mother wishes to put her babe on the bottle, supposing it to be four or six months old, and we wish to add something to the bottle, it is sometimes a difficult matter to know with what to begin. Dr. J. F. Meigs advises gelatine and arrow root. Dr. J. Lewis Smith, of New York, advocates the flour ball—the flour is tied in a linen rag and boiled for hours, opened and the interior taken out and grated and used with the milk. My preference would be barley; it is the least constipating and usually agrees well. After the child has become accustomed to it and the digestion is in good condition, a small quantity of oatmeal can be added with each or every alternate bottle, and a variety of diet in that way be instituted. Now in preparing the barley for the bottle we may either take the whole grain pearl barley and have it crushed in a coffee mill, or use Robinson's barley, which comes in packages finely powdered. The latter is more easily manipulated and requires less time to prepare it.

Dr. Keating says of the powdered barley: "Take a dessertspoonful, mix it into a smooth paste with a little water and gradually stir this into a pint of boiling milk. If the child is under six months of age you can then add from one-third to one-half of water, and stirring constantly, allow the mixture to boil for twenty minutes; to this can be added a large teaspoonful of white sugar and a pinch of salt. If this mixture is put into the refrigerator at once when it is made in the morning, it can be used for each bottle by warming over and straining."

Now, as to the subject of weaning. At what age should weaning begin, provided that there is no immediate necessity, and how should it be managed? If a child is to be taken to the sea shore, or some cool summer resort where milk can be supplied fresh and abundantly, the question of weaning in summer time has not half the importance attached to it as it has to those who are obliged to spend the summer in large cities. My own experience would say, that if a child has been nursed for four or six months the gradual addition to its dietary of a bottle will be of advantage. The experience of most of our leading authors would indicate that a child four months old thrives better partly nursed, and partly bottle fed, than one bottle fed alone; that in fact breast milk helps to make the bottle milk more digestible. Not only is this the case, but it is certainly a great relief to the mother; gives her more time to rest, is less drain on her nutrition, and it is also of importance should the child be obliged to take to the bottle, either because the mother's milk gives out or her health gives away. Four months is certainly young enough, provided the mother's milk is found to be of good quality, nourishing, and the child thrives upon it.

Keating says of a child born as late as January or February, "I should not recommend the addition of any bottle food until the following October, provided that the mother is able to nurse it, for a child born in October or November, and especially where the following summer can be spent out of town, or at the sea shore, the weaning process could possibly be all over by May."

If the mother is strong and hearty and has no consumption in the family, has plenty of milk, and is not in the least pulled down by nourishing her baby; if she can nurse it a year, I think it is so much the better, and for the last four or six months her child can take some bottle food in addition. I do not think any mother should nurse her child more than a year; there is no necessity for it as a rule. A good, strong healthy child that becomes accustomed to the bottle will wean itself before that time is up; and that is exactly what we wish a child to do—to wean itself. In the gradual process of weaning, and the addition of the bottle to its regular nursing, Keating gives the following programme for the child to take its food: "It should nurse from its mother in the morning, at six or seven, then, after its bath, take a bottle at half past ten or eleven; again a bottle at five or six; then the mother should nurse it at ten or eleven on retiring."

We are speaking now of a child six months old. The question may be asked, What should be the first choice when selecting the bottle food at this age? I would recommend that the bottle be prepared with barley cracker dust, or grated flour ball, and add increasing quantities, beginning with a small teaspoonful of Mellin's food. By using a mixture of the cereals we often get a more palatable and a more nutritious food than by using them singly. The child will show a decided preference for some kind of bottle food; but bear in mind it is a great mistake to stuff a child. Let me say emphatically, that when we use any substance besides milk in its bottle, such as the cereals, we should not forget that the child needs water—pure clean water to drink.

Frequently a child that is partly bottle-fed and partly nursed is restless at night, and will not sleep. Instead of the mother trying to put it to sleep by nursing, if she would simply give it some pure water in its bottle it would go to sleep, and not run the risk of indigestion from over-feeding. In summer time if a child takes more food than it can digest, this food is very apt to decompose and act as an irritant, and possibly give rise to an inflammation that may end in summer complaint. We will suppose now that a child has been weaned from the breast, and the object now is to gradually take off the bottle, or give it something additional besides that which it takes in its bottle. Certainly by the time that it is a year old it could very well be given a small cupful of chicken broth or beef soup; possibly before this time it has been given, instead of the usual bottle after waking from its midday nap, some boiled bread and milk; some chicken broth, with a little dry toast in it can take the place of this meal, and the bread and milk be given for supper time. In this way the bill of fare for three meals can be gradually mapped out and the child allowed to masticate a part of its food. This will aid the cutting of the teeth, as well as increase digestion. In conclusion, is it not our duty as medical men to instruct mothers, so far as lies in our power, how to properly feed and wean their infants?

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## A PLEA FOR MORE PROMPT AND THOROUGH TREATMENT OF EAR DISEASES.

By Wm. Ellery Briggs, M.D., Sacramento, Cal.

*Read before the California Northern District Medical Society.*

It is within the daily experience of all of us to hear slighting remarks in regard to the treatment of ear diseases. Only recently an eminent surgeon said to me: "There is not much in the treatment of ear disease, is there?" Were this sentiment not so generally voiced, and so greatly to the detriment of those affected with aural trouble, I would not occupy the time of this Society in an effort to controvert it.

Through hearing the profession speak with little confidence in efforts to restore the ear to health, the general public has accepted its verdict. As a result, most ear affections are treated only as a last resort, when patients have found that no relief can be expected, either from the great array of domestic remedies which they poke, indiscriminately, into the ears, or from the unaided efforts of nature.

The important question arises, to find some remedy for the present very unsatisfactory condition of affairs. Of course, as the public becomes more enlightened on topics relating to health, the more prompt will the afflicted be in seeking intelligent assistance. It will, however, always remain the province of the family physician to treat, or at least to advise as to the necessity of treating aural diseases. It is, therefore, of the utmost importance that the general practitioner should comprehend the gravity of ear symptoms, even if he does not feel called to treat them.

To enable the student to acquire even a moderate degree of competence in the diagnosis and treatment of aural affections, the college course must be lengthened. It is quite impossible for the student to learn general medicine and surgery and any useful knowledge of this specialty in the two or even three years that is generally allotted to the study of medicine in this country. We cannot, therefore, expect relief until the medical colleges are compelled to extend the curriculum to at least four nine-months' courses. And that much-to-be-desired result cannot be hoped for until uniform statutes have been enacted in the different states. Let us hope that it will not be very long before our standard of requirements will be raised so that the few profoundly ignorant men that are now found will not continue a reproach to the whole profession. Until the two and three-year medical colleges are things of the past, the medical profession of the United States will not be respected at home and abroad as it should be.

You will comprehend how little training some men have had when I tell you that, within the past ten days, a patient came a distance of two hundred and fifty miles, who was found to have healthy ears, after very tight plugs of inspissated cerumen were removed. According to the patient's statement, two physicians had been consulted, one of whom told him, after a careful examination, that he was suffering from a chronic catarrhal disease of the ear that would require a long course of treatment, while the other candidly said that he knew nothing about the ear, and advised him to seek skilled treatment.

There are two factors that principally conduce to the want of confidence in aural therapeutics. First, the tardiness of treatment, and second, the expectation of too great benefit from it. The surgeon, as well as the patient, is generally pleased to have a useful limb, after extensive injury or disease of a joint, not even expecting it to be restored to perfect function. Usually this is not the case with ear patients. If you cannot promise certain and perfect restoration of hearing, they will be dissatisfied and decline partial relief.

The neglect of prompt treatment of aural diseases cannot be too strongly deprecated. There is no organ the treatment of which can be neglected with less impunity than the ear. The "let alone" advice often given to patients leads to an inestimable amount of deafness, and to a large number of deaths. Prompt, efficient, and intelligent treatment of acute middle ear inflammations is followed by greater relief to the suffering patient than almost any other medical or surgical procedure. While fully aware of the limitations of the aurist's power in many directions, I am strongly convinced that a very large share of his want of success comes from the "let alone" policy which has been thoroughly instilled into the minds of our patrons. What surgeon considers it a reproach to his skill because he is unable to restore a perfect leg after excision of a neglected hip-joint? Yet we hear men say that there is little to be done for ear diseases, simply because there are so many neglected cases that cannot be restored to perfect hearing.

To more clearly illustrate my meaning, I will divide ear diseases into two classes:

1. Those that, as a rule, receive no treatment.
2. Those that receive tardy or inadequate treatment.

To the first class belong a very large percentage of all the acute middle-ear inflammations—those which arise during the exanthemata, diphtheria, pneumonia, typhoid fever, etc. The reason these serious inflammations are so rarely given appropriate treatment is that the general illness is considered so much more grave than the local trouble. This is greatly to be regretted, because many of the destructive ravages of acute middle ear disease are extensions of the catarrhal pharyngitis and naso-pharyngeal inflammations, which complicate scarlet fever, measles, etc. "An earache" is believed by the mother to be of little importance, and the family physician too often allows her to remain in this error. The patient is usually presented for treatment after weeks, months, or years, when suppuration has destroyed the delicate tissues of the drum membrane and middle ear, or perhaps has extended to the mastoid cells or brain.

The time during which one can expect to restore the ear to perfect function has passed in a large majority of cases before they receive intelligent and active treatment. The drum membrane should be punctured as soon as the accumulated secretion causes it to bulge. If it is allowed to rupture spontaneously there is greater danger of wide destruction of the membrane and extension of the disease to the mastoid cells and brain. The tympanic membrane is less important to hearing than is generally supposed, but it is of the utmost importance for the protection of the middle ear tissues. With a large perforation of the membrane the middle ear is exposed to the external air. In this unprotected condition the middle ear cavities are likely to be the source of steatomatous accumulations, recurrent attacks of purulent otitis, mastoid inflammations, and not infrequently of cerebral disease and death.

To the second class may be assigned cases of acute suppurative otitis media, coming on after taking cold, and non-suppurative inflammation of the middle ear. When acute otitis occurs alone it is much more likely to receive proper treatment than when it is the result of some general disease. However, these cases are too often not seen until the greatest opportunity for benefit has passed; and in a majority of them spontaneous rupture of the membrana tympani has occurred.

The course of treatment that should be pursued is briefly as follows: In the very early stages leeches should be applied on and near the tragus, the patient must be kept warm, preferably in bed, and dry heat applied over the ear. Aqueous solutions should not be instilled into the ear, as they can do no good. Politzer's bag should be used, and also treatment appropriate to the nasal inflammation, which is most likely present. If these measures do not check the trouble, and the membrane is found to be bulging, it should be freely incised in its most prominent part. To make the puncture with an ordinary sewing needle, as I have seen advised, is certainly bad surgery. The early and free escape of the pus usually gives prompt relief to pain, and checks further extension of the disease.

To illustrate the importance of surgical treatment in this condition, I will mention the case of a child of 13, who had been suffering with intense pain in the left ear for more than a week. She had been treated by her father, who, being a druggist, thought he knew all about "earache." Cocaine solution had been dropped into the ear, which of course could have no influence as long as the drum was intact. Phenacetine powders were administered to relieve pain, and poultices were applied. A day or two after, the right ear also became painful, and I was called in. There was profuse purulent discharge from a moderate-sized perforation of the membrane of the left ear. The drum membrane of the right ear was red, swollen, and bulging, and was promptly and freely punctured. A sero-purulent fluid discharged for three days, the membrane healed in less than a week, and the hearing was restored to normal in less than three weeks. The spontaneous rupture of the left membrane took about five weeks to heal, and after two months the hearing is only about two-thirds of normal. This case fairly illustrates the good results to be expected from prompt surgical interference in acute suppurative otitis media.

Disease of the mastoid cells and cerebral abscess are common results of neglected middle ear inflammations. The more we know of this complication the more we realize the importance of prompt and thorough surgical interference to preserve the life of the patient. Until very recent years, operations upon the mastoid had been reluctantly and indifferently performed. Much has been written upon the differential diagnosis between disease of the mastoid cells and thrombosis of the lateral sinus. Practically it is quite unnecessary to make such a differentiation, as in grave symptoms, arising in either trouble, an operation should be promptly performed. The mastoid should first be opened into the cells, then into the mastoid antrum, and the operation should be extended in any direction until the diseased tissue is all removed. The chisel, scoup and bone forceps can be used to open into the brain cavity, in case the disease is found to extend so far. Care must be taken not to wound the facial nerve, nor to open the healthy lateral sinus. In case the lateral sinus is found diseased, the thrombosis should be cleaned out.

In the past a great number of deaths have resulted from cerebral abscess and septic infection, following the extension of middle ear disease; but I believe that, with the modern free operation upon the mastoid and complete removal of all diseased tissue, this deplorable result need rarely occur. The operation should, of course, be done under thorough antiseptic precautions.

Another, and one of the most common ear affections, non-suppurative catarrhal otitis media, is rarely treated until it has existed for months or years. It is not a satisfactory disease to treat at any stage, but when of several years' standing it is almost a hopeless task to attempt to cure it. If these cases were seen and treated early the result would be very different. Many of these cases originate from some departure from a healthy condition, within the nasal or naso-pharyngeal cavities, that can be remedied. Were this done promptly it would frequently have a curative influence upon the ear trouble.

A common cause of ear trouble in the young, is adenoid vegetations in the vault of the pharynx. In severe cases of this affection the child finds great difficulty in breathing through the nose, and he sleeps with the mouth open. There is considerable muco-purulent secretion in the pharynx and from the anterior nares. These adventitious growths in the neighborhood of the Eustachean tube, by pressure prevent the free entrance of air into the middle ear, and the escape of secretion. This disturbs the circulation of the middle ear to such an extent that some aural affection occurs in from 50 to 75 per cent. of cases. Their injurious influence upon the ear is only one of the many harmful effects upon the health of the patient. It is very important that every physician should appreciate their baneful influence on the child and not allow them to escape attention.

In looking over the foregoing classification of aural troubles, I have felt that a third class ought to be created that would include those that are well and thoroughly treated from the earliest stages of the disease. However, until the public has been taught by the family physician that no ear disease or symptom is unworthy of careful and prompt attention, there will remain too few such cases to deserve the dignity of a class to contain them.

429 J street.

# A CASE OF PERFORATING ULCER OF THE FOOT WITH SOME OF THE SYMPTOMS OF TABES DORSALIS; REMOVAL OF OUTER SIDE OF FOOT; RECOVERY.—A CASE OF TALIPES VARUS IN A WOMAN 27 YEARS OF AGE; REMOVAL OF A WEDGE-SHAPED PORTION OF THE TARSUS; RECOVERY WITH GOOD RESULT.

By G. Childs-Macdonald, M. D. (Brux.), F. R. C. S. (Ed.), M. R. C. S. E., Sausalito, Cal.

*Read before the California Academy of Medicine.*

## Perforating Ulcer.

Joseph C——, aged 52, native of England; occupation, ship's carpenter. Resides at Stockton. Complains of lameness, swollen foot, and sore on sole.

Previous history: Patient has had fair health excepting an attack of fever while residing in Australia several years ago. In May, 1890, he first came to me complaining of rheumatic pain in the limbs. These, on questioning, proved to be of a darting character, and evidently not rheumatic; he presented the Argyll-Robertson phenomena. Tendon reflex, sluggish, otherwise no symptoms of tabes dorsalis were present. Family history not obtained.

History of present illness: Patient came to my office September 22, 1892, complaining of lameness and swelling of the right foot, but having very little pain. On inspection the whole member was found swollen and puffy, mostly marked on the dorsum. Over the plantar surface of the head of the fifth metatarsal bone was what had evidently at one time been a corn, on the edge of which were numerous sinuses, discharging the typical fluid seen in these cases, which is not pus. These sinuses led to the head of the bone, which was bare and commencing to be carious. The corn and surrounding tissues were anesthetic excepting toward the head of the bone, otherwise the whole thing was painless. I advised him to have the part excised and as much of the foot as became necessary. He requested some paliative treatment which I gave him, telling him to return and let me know his decision. This he did not do until November 30; on that date he walked into my office very lame, and informed me he had been to a considerable number of medical men, both in Stockton and San Francisco, but had obtained no relief; nearly every one differing as to diagnosis and treatment. His condition prevented him working, and he had finally come to the conclusion to let me do whatever I thought fit.

The following day I operated; Esmarch's bandage was applied, and the diseased portion of the sole removed, cutting widely. The head of the fifth metatarsal bone was markedly carious. The soft parts on the dorsum were deflected corresponding to the fifth and fourth metatarsus. The fifth was disarticulated, and the fourth sawn through close to its base. By this means sufficient flap was formed to cover the plantar wound. Silk stitches were used ; there were but two bleeding points of any size to pick up. The whole operation was done antiseptically. Hydrarg. perchloride 1:2000 being the solution used. The wound healed well, but somewhat sluggishly. Patient was able to get up and put on his shoe on December 12. From that date to December 23 he attended at my office, on which date he returned to Stockton as a foreman in one of the shipwright's yards. January 30, 1893, patient reports he is well and at work.

One of the most interesting and typical conditions of this case was that after the operation and during the whole process of healing the patient did not have one moment's pain; good evidence of the nerve condition. A piece of the plantar nerve in the excised portion near the ulcer presented the following conditions microscopically: The axis cylinder, substance of Schwan, and nucleated sheath were compressed and shrunken, exhibiting bulging in places. This contraction was evidently due to a proliferation and contraction of the endoneurium which had, apparently, irregularly strangled the softer tissues o the sheath.

Perforating ulcer is, I believe, always associated with tabes. It is one of its symptoms just as much as the joint condition seen in this disease, and several such cases have already been recorded. I have personally performed partial amputation three times for this condition. In my other cases the corn and ulcer appeared over the head of the first metatarsal bone, and this seems to be its most common seat, so far as records go. In my first case I amputated the great toe at its junction with the internal cuneform. In the second case, Chopart's amputation became necessary, owing to extension of the disease into the bones. In this last case, the disease appearing as it did on the outer side of the foot, left the man a good tread from heel to toe. In my experience no other treatment but amputation is of any avail.

### Talipes Varus.

M. W——, aged 27, native of Scotland; occupation, domestic servant. Patient's foot has been deformed from birth. When three years of age she had an operation performed, evidently tenotomy of the tendo achillis, since which time she has been using a boot with iron stays. The right foot is now in a marked condition of talapes varus, with some calcaneus. Progression is entirely on the outer side of the foot, and here the epidermis is heaped up. Over the insertion of the tendo achillis is an old cicatrix. The muscles of the calf are much atrophied, probably due to prolonged use of the irons. I advised patient to submit to an operation.

The girl had been to a number of surgeons in San Francisco, consulting as to the advisability of the operation proposed. Every one objected to any operative procedure. One objection was that it was a physical impossibility to straighten the foot; another opinion was that the muscles were too atrophied; a third deprecated any operation on the foot, in a woman of 27 years of age. Notwithstanding the many adverse criticisms, she determined to undergo the operation, and was accordingly admitted to St. Luke's Hospital on May 18, 1892.

The following day, assisted by Dr. Burnham, I operated. Esmarch's bandage having been applied, a horizontal incision was made, commencing over the tuberosity of the fifth metatarsal bone, to within half an inch of a vertical line represented by the fibula; from the anterior extremity of this incision a second one was made at right angles extending over half the dorsum of the foot. The triangular flap thus formed was deflected up and the tendons immediately beneath exposed. The two peronei tendons were removed from their grooves in the cuboid and held aside by blunt hooks; a periosteal elevator was now used to raise up all the extensor tendons, vessels, and nerves, and as much of the periosteum over the bones as could be gained. This is important, for the more saved the more perfect is the after consolidation. The tarsus was now attacked with chisel and mallet, the chisels differing in size. First, a portion of the tuberosity of the fifth metatarsal bone, part of the os calcis, and the whole of the cuboid were removed, then the external cuneform part of the middle and internal, and part of the scaphoid. A wedge was thus removed, its base being represented by the cuboid and its apex by the divided scaphoid. The foot could now be brought into a straight line. During the chiseling, a block was placed on the inner side of the foot, to act as a firm support for the instruments. The bones were so hard that it would have been impossible to cut them without some such support. A bag of shot or sand offers also an excellent support.

On May 23, two days from the operation, there being a considerable amount of tension on the inner side of the foot, I divided the tendo achillis, tibialis anticus and posticus, and the inner portion of the plantar fascia, passing the knife deeply into the muscles dividing the internal plantar vessels and all tense bands, but leaving the calcaneo-scaphoid ligament intact. The foot now lost its cramped position and the sides of the wedge came well together.

The process of repair was somewhat retarded, owing to suppuration, although the operation had been done antiseptically and the instruments boiled prior to use. The part was put up on an iron foot-piece, with a flange extending the whole length of the inner side. Corresponding to the tibia was a flat steel rod, bent so that its concave surface looked outward. This extended from the arch of the foot to the lower surface of the tuberosity of the tibia. When bound tightly to the leg, the spring in the rod kept a constant pressure on the inner side of the foot, pushing the prepedal portion outward.

Fourteen days after, this was changed for a splint having a flat iron foot-piece exactly corresponding to the plantar surface of the foot; on the outer side of this was a steel rod, which formed an obtuse angle outward with the foot-piece, and on the inner side were three strips of tin, perforated. The foot-piece was now fixed to the foot with plaster of Paris bandage, the tin strips being passed over the dorsum, from within, out, and incorporated in the plaster. When quite set, the rod was approximated to the side of the leg by an elastic band, by which means a steady pull was put on, turning the whole foot outward.

The patient left the hospital during the month of August, walking with the aid of a crutch. The foot has continued to consolidate and the girl has now returned to domestic service. The muscles of the calf, freed from the irons which so long held them, and having been treated by electricity and massage, have greatly increased in size and in power. As the leg is apparently somewhat shorter than the other, due to tilting of the pelvis, she has to wear a boot with a cork sole ¼ of an inch in thickness. Six months after operation she was able, without any assistance, to climb the Sausalito hills, and is now earning her living as a domestic servant.

I have to tender my thanks to Dr. Burnham for his attention to the case during the after-treatment, he then being resident physician at St. Luke's Hospital.

## DEPARTMENTS.

### OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M. D., Sacramento, Cal., and

HENRY GIBBONS, JR., M. D., Professor of Obstetrics and Diseases of Women, Cooper Medical College, San Francisco, Cal.

**Relation of the Vaginal Secretions to Puerperal Fever.**—DÖDERLEIN examined (*Zeitschr. f. Geburts-Nülfe*) the secretions in one hundred and ninety-five cases of pregnant women with reference to the presence of pathogenic organisms. In normal secretions only fission fungi were found, while bacilli and cocci occurred in great number and variety in those of disease. The percentage of healthy cases was 55.4 per cent., of pathological 44.6 per cent. In primiparæ the proportion of normal cases was a little larger, amounting to about 64 per cent. The author suggests the litmus reäction as a ready means of distinguishing healthy from morbid conditions of the vaginal secretions. Normally the reäction of the vaginal mucus is strongly acid, while in disease it is faintly acid, neutral or alkaline. Experiments show that the acid condition of the vaginal secretions is produced by the innoxious organisms which have their habitat in the healthy vagina. The author found by culture experiments that these organisms, when present in great abundance, were inimical to the growth of the staphylococcus. A similar observation has been made by Bumm. The author's conclusions for the practical obstetrician are to the effect that, in women whose vaginal secretions present the normal litmus reäction, a feverless childbed is assured, provided they escape infection from without. In mobid conditions of the vaginal secretions, pathogenic organisms are liable to be transported into the uterus on the examining finger. Without internal manipulation of any kind during labor, the danger of infection is almost *nil.* In private practice it is generally impracticable to distinguish between healthy and morbid vaginal secretions. The prophylaxis for every case must be such as to protect against all possible sources of infection. In hospital clinics the litmus reäction serves to separate the diseased from the normal cases. Antiseptic irrigation of the vagina for disinfection is not reliable. The irrigating fluid does not penetrate all the folds and recesses of the passages. Steffeck and Döderlein have practised irrigation combined with thorough friction with the fingers, and lubrication is re-supplied by rubbing the vaginal surfaces with mollin. For diseased cases they recommend the use of the disinfectant douche during the latter weeks of pregnancy as more satisfactory than attempts at sterilizing the passages during labor. A 1 per cent. solution of lactic acid answers the purpose. The secretions gradually take on a healthy character. The douching is discontinued when the litmus test gives a constant acid reäction.—*Brooklyn Medical Journal*, November, 1893.

**The Palliative Treatment of Carcinoma of the Cervix Uteri.**—SANGER (*Schmidt's Jahrbuch*), calls attention to the fact that Carl von Braun, before the days of total extirpation, succeeded in permanently curing 20 per cent. of his cases by amputating the cervix with the galvano-cautery loop, while Winter has shown that the results after extirpation are only 5 per cent. better. Only one-fourth of the whole number of patients who consult gynecologists are still in an operable condition; in those in which the disease has invaded the vesico-vaginal septum and the peri-uterine tissues palliative treatment alone is justifiable. This consists in curettage followed by cauterization with the Paquelin, and, after the slough has come away, applications of solutions of chloride of zinc (fifty to thirty per cent.). The writer separates the remains of the cervix as high as the peritoneum, anteriorly and posteriorly, and the bases of the broad ligaments laterally before removing the diseased tissue, tying any spurting vessels. The cervical canal is thoroughly cauterized. At the end of two weeks the chloride of zinc is applied several times. In one case of inoperable carcinoma thus treated there was no recurrence in nearly three years. In only one case out of five has there been a recurrence.—*American Journal of Medical Sciences*, November, 1893.

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## SURGERY.

By T. W. HUNTINGTON, B. A., M. D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal.,
J. F. MORSE, M. D., Surgeon German Hospital, San Francisco, Cal., and
G. F. SHIELS, M. D., C. M., F. R. C. S. E., Surgeon Polyclinic, San Francisco, Cal.

**The Influence of Erysipelas upon Malignant Growths.**—The evidence pointing to the influence of erysipelas upon the nutrition of malignant growths has been lately accumulating, and since FEHLEISEN published his paper in 1803 showing the possibility of producing erysipelas by inoculation with pure cultures of the streptococcus erysipelatis, and together with the notes of seven cases of irremediable malignant diseases in which he had practised inoculation, other observers have taken up the same line of practice. For example, BRUNS, in 1888, wrote an exhaustive article on the subject, and gave notes of 14 cases of undoubted malignant disease in which erysipelas occurred, either accidentally in the course of the malady, or was produced by inoculation. To these records are now to be added 9 others collected by W. B. COLEY, who contributes a paper on this subject to the last number of the *Annals of Surgery*. All the nine cases were sarcomata. The first one was round-celled sarcoma of the neck, with five recurrences within three years. At the last operation a large open wound, five inches long by two wide, was left, which, owing to complete removal having been impossible, was soon filled with flabby sarcomatous granulations. Two weeks after the operation the patient had a severe attack of facial erysipelas, and subsequently a second attack. Three other cases were reported as cured; decided temporary improvement was noted in four, and one case was still under treatment. The author points out that the theories which have been put forward to account for the influence of erysipelas over malignant growths are mainly three: (1) That the erysipelas coccus has a direct destructive action upon the cell elements of the new growth. (2) That the high temperature alone is sufficient to destroy the cells of lower vitality, causing a fatty degeneration, followed by subsequent reabsorption. (3) That sarcoma and carcinoma are both of bacterial origin, and the erysipelas germ has a direct antagonistic effect upon the cancer bacillus. These remarks are of much interest and have an important bearing upon the treatment of the various forms of sarcoma and carcinoma which are irremediable by other means.—*Medical Press and Circular*, October 14, 1893.

**Osteoplastic Operations upon the Cranial Bones.**—CHIPAULT (*Gazette des Hôpitaux*) gives a very full account of all the attempts which have been made to fill the gap after extensive removal of bone from the vault of the skull. Foreign materials—such as hard rubber, lead, celluloid, ivory and aluminium—have been used. The great majority of such attempts have failed, although in a few the plate has been successfully healed in, and has served its purpose of protection—celluloid having proved the most practical material. Decalcified bone has been used, but disappears by absorption after a time, its place being taken by fibrous tissue. Living bone from an animal (dog, goose) has been healed in, but the final result is unknown. Bone from another part of the same individual, or the bone just removed from the opening, has been inserted, but it also disappears to become absorbed, in whole or in part, with the lapse of time. The only thoroughly reliable methods are those making a thin bone-periosteum flap (König), or a flap of the entire thickness of the skull (Wagner-Wolff) left in connection with the soft parts. The latter in particular enables the operator to make very extensive openings in the skull. The former is excellent for closing old openings without causing any fresh bone defects. Chipault concludes by suggesting a new method for cutting the Wagner-Wolff flap, but it does not appear to offer any marked advantages over those already in use.—*International Medical Magazine*, November, 1893.

## OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M. D., Sacramento, Cal.

**The Occurrence of Hemorrhage after Operation for the Removal of Adenoid Tissue from the Naso-Pharyngeal Vault; with the Report of a Fatal Case.**—DR. J. E. NEWCOMB groups the possible complications after removal of adenoid tissue as follows: (1) Bronchitis may arise from an escape of blood into the lower air-tract. (2) An infectious element may be introduced, leading to septic mischief. (3) Inflammation of the middle ear may result.

(4) There may be hemorrhage, primary or secondary. The first of these is very unlikely to occur—only two cases having been recorded. A few cases of traumatic fever and erysipelas have been reported; cases of middle ear trouble are not rare. The author gives the history of a fatal case of hemorrhage occurring in an anemic and strumous child about four years old. There was no history of hemophilia in either parent's family. Ether was administered; a Gradle forceps and a Gottstein curette were employed. A fair amount of tissue was removed; bleeding quickly ceased. On leaving the hospital, two hours after the operation, the child was bright and apparently doing well. Four hours after the operation, according to the mother's statement, there was a "rattling" in his throat, and slight bleeding from the anterior nares. The doctor was not called, as the mother had been instructed what to do until sixteen hours after the operation. A few moments after the doctor arrived the child died from the effects of loss of blood. Cartaz enumerates the causes of hemorrhage as follows: (1) Hemorrhage has occurred more frequently when no anesthetic has been used. (2) We may injure a large blood vessel. (3) We may tear off a piece of healthy mucous membrane. (4) Hemorrhage is apt to occur in females past the menopause, if the operation is coincident with the menstrual epoch. (5) Hemorrhage may occur if there has been a recent inflammation of the back part of the throat. (6) If the masses to be removed have a fibroid consistency, a great number of cases of serious hemorrhage have been reported after this operation, but only a few fatal results. Morrell Mackenzie found insufflations of tannin or matico powder to always check the bleeding, while Löwenberg succeeded with alum.—*American Journal of Medical Sciences*, November, 1893.

**Indirect Massage of the Lens for Artifical Ripening of Cataract.**—DR. EDWARD JACKSON reports the favorable results in seven cases of immature cataracts from the operation, suggested by Pooley, of artificial ripening. The method of operating is as follows: After full dilatation of the pupil and free instillation of cocaine, the anterior chamber is tapped with a paracentesis needle, the incision being kept open until the aqueous is withdrawn by the aid of pressure, through the lid, upon the globe, with the finger. Then a tortoise-shell spatula is pressed upon the cornea within the area of the pupil and rubbed in a circle, and then in radiating lines, stroked from the centre toward the periphery of the cornea. During this manipulation the margin of the pupil will be seen to retreat before the spatula, so that a large part of the anterior surface of the lens can be acted upon without pressure on the iris. The manipulation is continued a minute and a half or two minutes. The after-treatment consists in keeping the eye closed for a few hours, and the subsequent instillation of a mydriatic until the eye is free from hyperemia. The author summarizes his conclusions of this method of artificial maturation of cataract as follows: It seems more certainly efficient than Förster's. It is almost entirely free from danger. It is probably a better means of avoiding prolonged practical blindness than the extraction of immature cataract.—*New York Medical Journal*, October 28, 1893.

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## DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

By G. L. SIMMONS, JR., M. D., Sacramento, Cal.

**Oil of Eucalyptus as a Urinary Antiseptic.**—DR. G. FRANK LYDSTON says he has found pure oil of eucalyptus an ideal urinary antiseptic and one that has proved most useful in meeting post-operative emergencies. He reports several cases, in one of which, though previous to administration and operation the urine had been highly ammoniacal, yet 24 hours after the administration of the oil, ten drops every two hours, no odor was present. This urine was allowed to stand in an open bottle in a warm room, yet it showed no signs of decomposition till the sixth day. "The preparation of eucalyptus which is used is of considerable moment, as many are absolutely worthless. Sander's oil of eucalyptus is reliable, but that known as Tyndale's has seemed to me to be the most palatable and elegant of all those which have been submitted to me for trial. I believe, moreover, that it is, perhaps, the most trustworthy preparation upon the market. There is also a solution of eucalyptus with boric acid, prepared by the same firm, that is an elegant and reliable preparation where the stomach does not well tolerate the oil. The addition of boric acid may also be of value. My routine custom after operations on the genito-urinary tract is to give 10 minims of the pure oil of eucalyptus every two hours for two or three days, and thrice daily thereafter. Where practicable to do so, I prefer to give a few days' preparatory treatment with the eucalyptus before operating. Since beginning the use of the eucalyptus I have met with fewer post-operative annoyances than ever before, and I am confident that credit is due the drug."—*Journal Cutaneous and Genito-Urinary Diseases*, November, 1893.

**Action of Mercury and Potassium Iodide on Metabolism in Syphilitics.**—LEONE LEVI (*Gazz. d. Ospet.*) has investigated the action of these substances on metabolism and on the blood of syphilitic subjects. His conclusions, based on experience with 252 patients, are as follows: (1) The salts of mercury increase organic combustion and favor metabolism in the syphilitic. Corresponding to the gradual progressive disappearance of the symptoms of the disease there is an improvement in nutrition, evident both in the increased richness of the blood in corpuscles and hemoglobin, and in an increased weight and muscular strength. Mercury appears to cause a more rapid elimination of the specific products of the disease, but as recurrences often take place, even after a prolonged mercurial course, it does not appear to destroy the (hypothetical) microbe of the disorder. On the other hand, if mercury be used for too prolonged a period, ill effects are manifest in a diminution of the red corpuscles and hemoglobin. (2) Iodide of potassium has generally an action analogous to that of mercury on nutrition; but while it increases the richness of the blood, the body weight, muscular force and blood pressure, it at the same time diminishes the amount of urea excreted. Iodide of potassium, therefore, retards metabolism, and would appear to retain the mercury in the tissues of those who have already undergone a course of mercury. It also appears, according to Pellizzari, to have a chemical action on the chemical products of tertiary syphilis, neutralizing the toxic material as it is formed —*British Medical Journal*. November 18, 1893.

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## MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M. A., M. B., C. M., Professor of Clinical Medicine, University of California, San Francisco.

**The Value of Creasote in Gastric Fermentation.**—Creasote has been so largely used within the last few years in the treatment of bronchial or general pulmonary disease that many of us have forgotten the valuable results to be obtained by its employment in the treatment of gastro-intestinal troubles associated with fermentation. As is well known, the name of the substance is derived from the fact that it was found to prevent decomposition of nitrogenous matter, and that it therefore acted as a distinct antiseptic. There are two classes of cases of indigestion or disorder in the alimentary canal in which creasote is of great value. Aside from those instances of persistent vomiting, where by its local action it often renders us great service, it is also useful in those cases of fermentation or chronic indigestion in which there are formed large quantities of flatus some time after eating. Whether the distention is caused by the fermentation of starches or the decomposition of nitrogenous materials, a minim or two of creasote half an hour or so after eating, or immediately after eating, will often help such cases. Another instance in which creasote is of value is in a case of severe acute gastro-intestinal fermentation, which is often manifested, in the more severe cases, by an actual attack of cholera morbus. The administration of creasote in such an instance not only tends to prevent the vomiting, but to inhibit the production of poisonous products which are developing from the bad food that the patient has been unfortunate enough to take. Here, again, the dose of from 1 to 3 minims of creasote, well diluted, proves of value. In those instances in which the vomiting is too intense to permit the swallowing of much liquid, it may be administered in the dose of from ½ to 1 minim in a tablespoonful of water, milk, or brandy, a few drops of this mixture being given at a time. Notwithstanding the laudatory statements which have been made as to the value of thymol, naphthaline, and other gastro-intestinal antiseptics, we believe that creasote is the best one which we can employ, and we doubt, if it is administered carefully, that it is as apt to produce disturbance of the digestion by irritation of the mucous membrane as some of the more highly praised and more expensive remedies. It is hardly necessary to add that it is important to use the beechwood creasote and not that derived from the mineral kingdom.—*Therapeutic Gazette*, November, 1893.

**Clinical Experiences with the Cathartic Acid of Senna.**—DR. KARL DEHIO, of Dorpat (*St. Petersburger med. Wochenschrift*), refers to the fact that the active principles of rhubarb, frangula, and senna possess very close relationship, or are perhaps identical. He has experimented clinically with the cathartic acid obtained from senna by Gentz, which he believes to be more constant in its composition and more likely to be pure than that previously obtained by Keebly. Dehio administered it to twenty-one persons, giving adults 2½ grains and children ⅚ grain. This dose was somewhat too large. It did not fail in any case; the bowels were moved in the majority of cases in from eight to twelve hours, exceptionally earlier or later. In some cases it caused pain, but it was less likely to do this when it acted slowly. It appeared to act best in obstinate constipation.—*Therapeutic Gazette*, November, 1893.

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## MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M. D., Demonstrator of Pathology, and Adjunct to the Chair of Clinical Medicine, Cooper Medical College, San Francisco, Cal.

**Bradycardia.**—DR. HAMPELN divides this condition into two groups, physiological and pathological. Physiological slowing of the action of the heart is observed during convalescence from many diseases, and is especially noted during the puerperium; it is a symptom of fatigue. He divides the pathological group of bradycardia into two forms, temporary and permanent. The temporary form is observed in meningitis and typhoid fever and as a symptom in many diseases of the nervous system. It is further observed, in uremia and icterus and after the use of tobacco, alcohol and digitalis (toxic bradycardia). Permanent bradycardia is usually symptomatic of some organic heart affection, although it may exist as a functional neurosis. The latter condition is frequently observed in healthy adults in whom no organic disease of the heart can be detected. In these cases there is an average of 40—50 pulse beats in a minute, which is described by other writers as a physiological condition peculiar to the individual. Cases of pathological bradycardia have been observed where the number of pulse beats has been reduced to 20, or even 8, in a minute. Many of these cases seem in no wise to interfere with the health of the individual, but, as a rule, it indicates a condition of grave import. The following affections are frequently accompanied by bradycardia: (1) Valvular heart disease, especially aortic stenosis. (2) Sclerosis of the coronary arteries. (3) Myocarditis and fatty degeneration of the heart. In stenosis of the aortic orifice, bradycardia is an expression of compensation, the heart contracting slowly to overcome the resistance at the aortic ostium. Bradycardia is considered by the writer to be in many cases the only positive sign of sclerosis of the coronary arteries.—*St. Petersburger med. Wochenschrift.*

**The Danger of Inhabiting Rooms Previously Occupied by Consumptives.**—The valuable and significant investigations made by CORNET demonstrate that tubercle bacilli are not ubiquitous, but are only met in circumscribed regions, the centre of which is a tuberculous person. His investigations further show that rooms occupied by consumptives are infected, owing to contamination with dried sputum. Since these memorable investigations, numerous cases have been reported, by different observers, of infection resulting in this manner. M. DUCOR relates three cases (mother and two infants), without any history of heredity, who contracted tuberculosis in a room which was previously occupied by a person who died of tuberculosis. In the paper, covering the walls of this room, he found Koch's tubercle bacillus. He advocates the reception of sputa in suitable cuspidors and claims that too much stress cannot be laid, not only on thorough disinfection of a room previously occupied by a consumptive, but that this room should be re papered. According to the degree of attenuation of the tuberculous matter inhaled in an infected room, general tuberculosis, local tuberculosis, or scrofulosis may result.—*Semaine Médicale.*

**A New Reaction for Biliary Pigments in the Urine.**—DR. H. ROSIN prepares his test as follows: a solution, the color of port wine, is made with the official tincture of iodine and alcohol. This color can be obtained accurately by adding 2 drops of iodine tincture to a test tube filled to ¼ its capacity with alcohol. The solution thus prepared is carefully poured over the urine to be examined; immediately, or after a minute, there appears at the point of contact of the two solutions a grass-green coloration which often persists for hours. Should the urine contain no bile pigments, there is at the point of contact a yellowish discoloration. The test just described has been used at the third medical clinic in Berlin, and is pronounced the simplest and most sensitive reagent for bile pigments in the urine.—*Wiener med. Presse.*

**The Fever of Pulmonary Tuberculosis and its Prognostic Significance.**—STRUMPELL (*Deutsch med. Wochenschr.*) maintains that while tuberculosis may produce fever, the latter, in the majority of instances, is the result of secondary non-tubercular inflammation. Cases of pulmonary tuberculosis accompanied by fever may be divided into several groups: (1) *Status Subfebrilis.*—This group includes cases where the morning temperature is normal, whereas the afternoon and evening temperatures are elevated. The elevations of temperature, however, are rarely beyond 101.3° F. The cases showing this course of temperature are not stationary but belong to the chronic and relatively good cases of pulmonary tuberculosis. (2) *Intermittent Hectic Fever.*—The morning temperature is normal, the evening temperature is elevated to 101.3° to 104° F. or more. These cases are characterized by a progressive affection, which in general is more progressive the higher the evening temperature. (3) and (4) *Remittent and Continuous Fever.*—The remittent type (remission of temperature in the morning which does not reach the normal, exacerbations of evening temperature) is frequent in the florid forms of pulmonary tuberculosis. A true *febris continua* is infrequent. It is observed, aside from its occurrence in acute miliary tuberculosis, in rapidly beginning cases of phthisis, at a time when the physical symptoms furnish no tangible evidence of the disease. (5) *Irregular Fever.*—This has an ominous significance, as this type of fever frequently accompanies the last stage of chronic tuberculosis. Collapse temperatures are very unfavorable. Naturally the above types of fever are influenced by complications.—*Wiener med. Presse.*

**The Treatment of Gastric Hypersecretion.**—Four indications must be fulfilled: (1) To suppress all causes which excite the gastric secretion. This may be attained by interdicting excessive mental work and vexation, limiting the use of tobacco, and prohibiting the use of condiments, strong sauces, tea, coffee, liquors, and alcohol. (2) By prescribing a dietary in accordance with the digestive capabilities of the stomach. Nitrogenous food well masticated serves as the basis of alimentation, recourse being had chiefly to beef and mutton. The amylaceous foods are better tolerated after lavage of the stomach, followed by the ingestion of from 3 to 4 grammes of the bicarbonate of soda. It is best to reject vegetables from the dietary, and reduce the quantity of bread as much as possible. No more than two glasses of water should be drank at each of the principal meals. (3) Remedies directed toward diminishing the hypersecretion are usually the alkalies in connection with lavage of the stomach. The powdered alkalies are preferable to the natural mineral waters. Bicarbonate of soda may be given in 2-gramme doses, commencing one or two hours after each meal. In all about 10 to 20 grammes of bicarbonate of soda are administered daily. The stomach must be washed daily, or preferably before retiring, in case stomach disturbances are most intense at night. (4) If the above means do not suffice to control the gastric hypersecretion, then the treatment must be purely symptomatic.—*Union Médicale.*

**The Intestinal Origin of Chlorosis.**—In this paper FORCHHEIMER seeks to show that chlorosis is produced by changes primarily dominant in the small intestine. Sir Andrew Clark and others have already directed attention to the connection between intestinal process and chlorosis. This fact being admitted, he endeavors to show how chlorosis originates in the intestines. The condition of the blood in chlorosis consists in a diminution of hemoglobin for each red corpuscle (*oligochromemia*). A diminution of hemoglobin can only occur from two causes, viz: the destruction of hemoglobin becomes abnormally great, or the formation becomes abnormally small. A destruction of the hemoglobin is out of the question, as it cannot occur without destruction of the red corpuscles, which are not materially diminished in chlorosis. That there is no appreciable destruction of hemoglobin in chlorosis can be proven by an examination of the urine in all cases in which the hemoglobin sinks to 60 per cent.

or below, according to the hemometer of Fleischl. Certain observations made by the writer on rabbits show that hemoglobin is taken up by the blood from the intestine. Investigations with the blood of individuals with reference to the ingestion of food, demonstrate that there was an absolute increase of nearly 3 per cent. of hemoglobin after the ingestion of a meal. The writer presumes that in intestinal digestion a certain indefinite toxic substance is developed, which is inimical to the formation of hemoglobin. His treatment of the disease is based on this fact. It consists essentially in antiseptics, notably salol and hydronaphthol. By the use of these agents alone in 11 cases, a steady increase in the percentage of hemoglobin was noted. With the rise in the percentage of hemoglobin improvement commenced.—*American Journal of Medical Science.*

**Immunization against Cholera.**—SAWTSCHENKO and SABOLOTNI, after extensive experimentation with this object in view, formulate their conclusions as follows: (1) The blood serum of human beings, who have ingested cultures of cholera bacilli, which have been previously destroyed, possesses immunity against the action of cholera bacilli. (2) By the ingestion of destroyed cholera bacilli, immunity against cholera can be secured. (3) The stools of individuals thus immunized can, notwithstanding their normal appearance, contain large numbers of the comma bacilli, in case the latter have reached the intestinal tract. (4) These bacilli are virulent as they have not lost their vitality by the sojourn in the intestinal tract of immunized individuals.—*Münchener med. Wochenschrift.*

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## MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M. D., Assistant Physician, State Asylum for Insane,
Stockton, Cal.

**Compulsory Ideas to Commit Murder.**—DR. LADAME, of Paris, in a recent article, advances the opinion, based upon careful study and observation, that in the mentally degenerated an impulse to commit murder, like dipsomania, may be the only, or at least the most prominent symptom of a morbid mental condition. He mentions the case of a mentally degenerated, not an epileptic, but a mild case of imbecility, who was one day controlled by compulsory ideas to commit murder. The patient made an attack on a person, and, his victim getting away from him, he satisfied his impulse on inanimate objects. Cases in which such compulsory ideas in mentally degenerated have an imitative effect, are well-known and not uncommon. The publicity given to murder cases by newspapers and open court trials is dangerous to such persons. In this connection the author relates interesting cases from his own experience. A woman attempted to put herself and her children to death by means of carbonic oxide gas, another one begged to be admitted into an institution because she feared that she would yield to an impulse to kill her children. The first case, of which the report is very fragmentary, resembles a condition of emotional excitement. The second case appears to be the picture of a hysterical, hallucinatory delirium in a person mentally degenerated. In these cases we are dealing with compulsory ideas, and it is worthy of note that the mother who was not weak-minded or melancholy knew enough to protect herself against the execution of the compulsory idea which had taken possession of her. Ladame concludes as follows: From among the large class of insane with murderous impulses one must set aside, as a special form, those who are inspired to murder by compulsory ideas. The compulsory idea to murder is a symptom indicative of the hereditary forms of insanity. The patients subject to this may be divided into: (1) Those whose compulsory ideas remain theoretical; and (2) Those who yield to the impulse and commit murder or make attempts to murder. This compulsory idea is sometimes an isolated symptom in those suffering from hereditary insanity, and may be intermittent and periodical. It may exist for years and is, from a forensic standpoint, of the greatest interest. It may occur either sporadically or, what is more frequent, in the form of a mental epidemic following public executions or after witnessing exciting crimes.—Irrenfreund—*Allg. Zeitschr. für Psychiatrie*, vol. xlix, No. 6.

**Asymmetries of the Face Met With in the Insane.**—DR. TURNER reports the results of observations made of asymmetries of the two sides of the face, believing that they enable him to arrive at a conclusion as to the seat of the disease. He found inequalities of the pupil in 25 per cent. of recent cases and in 35 per cent. of chronic cases, and still more frequently in patients suffering from general paralysis. Usually the right pupil was the larger. He also made observations as to the deviation of the tongue from the median line when protruded. While the inequality of the pupil is subject to frequent variations, the tongue is always protruded towards the same side in the same patient. As the movements of the tongue are connected with the highest mental functions the deviation is an indication of deep-seated disturbances in the motor centres of one side. With regard to inequalities in the development of the facial muscles, Dr. Turner had observed that in idiocy and in congenital forms of feeble-mindedness generally speaking, the defect was especially marked in the lower part of the face, while in the acquired forms it was more noticeable in the upper part. A diminution in the tonus of the facial muscles leading to a disappearance of the facial expression he had found most marked in general paralysis of the insane.—*Journal of Mental Science.*

## FORMULÆ.

By GEO. B. SOMERS, M. D., San Francisco, Cal.

p 572

**Anti-Pruritic Oil.**—BRONSON, of New York, has employed the following both in local and so-called general forms of pruritus. The oil should not be applied too frequently:

| | |
|---|---|
| Carbolic acid | ʒ i–ii |
| Liquor potassæ | ʒ i |
| Ol. lini | ℥ i |

S—Shake before using. A drop or two of oil of bergamot may be added to disguise the odor of the linseed oil.—*Journal American Medical Association.*

**Deodorizer in Cancer of the Uterus:**

| | |
|---|---|
| Salicylic acid | gr. vi |
| Salicylate of soda | ʒ iii |
| Tinct. eucalyptus | ʒ vi |
| Distilled water | ℥ vi |

S.—A tablespoonful in a pint of water as an injection every three or four hours.—*Révue Médicale.*

**Acute Rheumatism.**—BOURGET, in a series of experiments relative to the absorption of salicylic acid by the skin, determined by examining the effect on the urine, that the following combination produced the strongest and best salicylic reaction:

| | |
|---|---|
| Salicylic acid. | |
| Lanoline. | |
| Spirits turpentine āā | ʒ ii |
| Lard | ℥ ii |

S.—Spread on the large joints and cover with flannel.—*Révue Médicale.*

**Delirium Tremens.**—The following has been found useful:

| | |
|---|---|
| Antipyrin | ʒ i |
| Bromide of potassium | ʒ iss |
| Syrup of chloral | ℥ i |
| Peppermint water | ℥ iv |

S.—Tablespoonful every hour until sleep is produced.—*Medical Press and Circular.*

ORIGINAL DEFECTIVE

**Pilocarpine to Appease the Thirst of Diabetics:**

| | |
|---|---|
| Nitrate of pilocarpine | gr. iii |
| Dilute alcohol | ʒ i |
| Distilled water | ℥ ss |

S.—Four or five drops under the tongue two or three times a day.—*National Druggist.*

**Chalybeate Lemonade:**

| | |
|---|---|
| Tinct. ferri perchlor. | ʒ iv |
| Acidi phos. dil. | ʒ iv |
| Tinct. limonis | ʒ ii |
| Syr. simpl. *ad.* | ℥ vi |

S.—Two teaspoonfuls of the syrup in a small tumblerful of water after meals.—*Practitioner.*

## PUBLIC HEALTH.

By W. R. Cluness, M.A., M.D., San Francisco, Cal.

**Mortality for October.**—The deaths registered in 90 town districts of the State during the month of October, in a population of 800,763, correspond to an annual rate of 15.39 a thousand; the total mortality having been 1,027. 112 deaths were due to zymotic diseases, giving an annual rate of 1.67 a thousand; of these, 12 were due to diarrhea and dysentery, 25 to cholera infantum, 16 to diphtheria, 5 to croup, 1 to scarlet fever, 2 to whooping-cough, 34 to typhoid fever, 12 to remittent fever and 5 to cerebro-spinal fever. 282 deaths resulted from diseases of the respiratory organs, giving an annual rate of 3.89 a thousand; of these, 15 were due to consumption, 91 to pneumonia, 31 to acute bronchitis, and 10 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.25 and 1.38, respectively. 78 deaths resulted from diseases of the heart, 11 from alcoholism, 1 from erysipelas, 34 from cancer, and 437 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 579,500, was 15.64. The highest rate for the month, occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco; the lowest from San Diego.

## METEOROLOGY.

**Summary for October.**—*Temperature.*—The normal temperature of the State for October is 61°; the mean for October, 1893, was 60°; a departure from the normal of -1°. The highest monthly mean was 78°, at Salton, in the desert regions of San Diego county, 263 feet below sea level; the lowest, 38° at Cisco, in the mountain regions of Placer County, 5,939 feet above sea level. The maximum temperature was 102°, at Indio, in San Diego County, on the 8th; the minimum, 20°, at Cisco, and at Boca on the 16th. The greatest monthly range was 68°, at the Agricultural Experiment Station, near Tulare; the least, 25°, at Point Lobos.

*Rainfall.*—The normal precipitation of the State for October is 1.22 inches; the average for October was 0.50 inches, a departure from normal of -0.72 inches. The greatest monthly precipitation was 6.25 inches, at Crescent City lighthouse; the least, nothing, at several places in the State.

*Wind.*—The prevailing direction of wind was west.

*Unusual Features.*—There was no unusual meteorological feature of the month, except the continuation of the abnormally cool weather, which has been an unusual meteorological phenomena during the entire year so far. The deficiency in heat from January 1 to October 31, 1893, amounts to 596 degrees, which is an average daily loss of a little over two degrees.—James A. Barwick, Director California Weather Service.

## California—Tabular Statement for October, 1893.

| STATIONS. | TEMPERATURE. | | | | | | RAINFALL. | | Mean Relative Humidity | WEATHER. | | | WIND. | FURNISHED BY— |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Highest | Lowest | Mean Highest | Mean Lowest | Mean Daily Range | No of Days Rain Fell | Total Rainfall | | No. of Clear Days | No. of Fair Days | No. of Cloudy Days | Prevailing Direction. | |
| Auburn ..........Cal. | 61.5 | 87.0 | 43.0 | ---- | ---- | ---- | ---- | 1.11 | ---- | ---- | ---- | ---- | W. | Southern Pacific Company. |
| Berkeley......... " | 54.0 | 77.0 | 45.0 | 65.0 | 50.0 | 15.0 | 3 | 0.52 | 82.0 | 18 | 7 | 6 | W. | Obs. University of California. |
| Colfax........... " | 58.9 | 76.0 | 38.0 | ---- | ---- | ---- | ---- | 1.23 | ---- | ---- | ---- | ---- | N.E. | Southern Pacific Company. |
| Eureka.......... " | 51.0 | 68.0 | 38.0 | 57.0 | 46.0 | 11.0 | 13 | 4.33 | 94.0 | 10 | 8 | 3 | N. | Weather Bureau Dept. Agr. |
| Fresno........... " | 60.7 | 88.0 | 36.0 | 75.2 | 46.3 | 28.9 | 1 | 0.02 | 50.0 | 24 | 5 | 2 | N.W. | " " " |
| Keeler........... " | 60.0 | 81.0 | 41.0 | 71.5 | 48.4 | 23.1 | 1 | T. | 32.0 | 23 | 4 | 4 | S.W. | " " " |
| Los Angeles.... " | 63.0 | 91.0 | 46.0 | 75.4 | 51.5 | 23.9 | 4 | 0.75 | 73.0 | 15 | 12 | 4 | W. | " " " |
| Monterey ....... " | 56.4 | 80.0 | 34.0 | ---- | ---- | ---- | ---- | 0.05 | ---- | ---- | ---- | ---- | S. | Southern Pacific Company. |
| Napa.......... .. " | 58.2 | 81.0 | 39.0 | 69.7 | 46.7 | 23.0 | 1 | 0.17 | 51.0 | 21 | 8 | 2 | S. | Station Napa Insane Asylum. |
| Oakland......... " | 57.6 | 77.0 | 43.0 | 65.8 | 49.3 | 16.5 | 4 | 0.29 | 96.0 | 22 | 7 | 2 | W. | Chabot Observatory. |
| Paso Robles.... " | 54.4 | 88.0 | 34.0 | ---- | ---- | ---- | ---- | 0.24 | ---- | ---- | ---- | ---- | N. | Southern Pacific Company. |
| Red Bluff....... " | 61.0 | 84.0 | 40.0 | 74.0 | 49.0 | 25.0 | 5 | 1.09 | 54.0 | 27 | 3 | 1 | N.W. | Weather Bureau Dept. Agr. |
| Sacramento. ... " | 60.2 | 81.0 | 38.0 | 72.7 | 47.7 | 25.0 | 1 | 0.12 | 61.0 | 20 | 10 | 1 | S.E. | " " " |
| San Bernardino " | 61.0 | 91.0 | 40.0 | 76.0 | 45.0 | 31.0 | 3 | 1.05 | 81.0 | 21 | 6 | 4 | W. | A. K. Johnson, M. D |
| San Diego....... " | 62.7 | 88.0 | 50.0 | 72.0 | 58.0 | 14.0 | 1 | 0.11 | 73.0 | 22 | 7 | 2 | W. | Weather Bureau Dept. Agr. |
| San Francisco.. " | 57.6 | 79.0 | 47.0 | 63.9 | 51.2 | 12.7 | 3 | 0.16 | 77.0 | 18 | 10 | 3 | S.W. | " " " |
| Santa Barbara.. " | 62.0 | 88.0 | 44.0 | 71.0 | 52.0 | 19.0 | 2 | 0.82 | 71.0 | 18 | 6 | 7 | W. | Hugh D. Vail. |
| Santa Cruz...... " | 58.0 | 85.0 | 39.0 | 72.0 | 45.0 | 27.0 | 2 | 0.75 | ---- | 19 | 6 | 6 | S.W. | W. R. Springer. |
| Yuma...........A. T. | 72.0 | 98.0 | 49.0 | 88.1 | 55.8 | 32.3 | 1 | 0.01 | 43.0 | 25 | 5 | 1 | N.E. | Weather Bureau Dept. Agr. |

T. means a trace of rain.

Blank (----) indicates data missing.

# Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: DECEMBER, 1893.

## PERIODS OF INCUBATION AND INFECTION.

In 1889 the Clinical Society of London appointed a committee to investigate the periods of incubation and contagiousness of certain infectious diseases. This was subsequently published as a supplement to the XXV Vol. of the Transactions of the Society. The material for the report was obtained in response to a circular letter issued by the committee, and by an examination of the reports of Medical Inspectors to the Local Government Board, extending over a period of ten years. The immense mass of material thus available was digested by DR. DAWSON WILLIAMS, one of the honorary secretaries to the committee, and the result has been an exhaustive report covering 235 pages. The *British Medical Journal*, in reviewing this report, publishes a summary of the conclusions reached, which is of such practical importance that we present it at length.

DIPHTHERIA.—*Incubation period.*—Sixty detailed communications containing 87 separate cases, besides other data, were analyzed for the purpose of the report. In 27 instances the exposure to infection was for a short period on a single occasion, and in all of these, with one exception, in which the facts were rather doubtful, the period of incubation was 7 days or less; in 63 the period was 4 days or less. If to these are added certain other cases in which the dates that exposure commenced are positively known, and the sets of cases are taken together, the result is reached that in 30, or 58 per cent., the period of incubation cannot have been more than 4 days, while in 45, or 87 per cent., it cannot have been more than 7 days. The general conclusion on this head is that the incubation period of diphtheria does not, as a rule, exceed 4 days, and is more often 2 days than any other period. Not infrequently it extends to 5, 6, or 7 days, but it is doubtful whether it ever exceeds the last named period.

*Infective period.*—In the large majority of cases reported to the committee, infection was attributed to personal intercourse with a sufferer or convalescent. A person may be infected by a patient suffering from diphtheria (*a*) in the incubative stage; (*b*) during the developed attack;

(*c*) for a period of long, but uncertain, and probably varying, duration after apparent recovery. In such cases of late infection some unhealthy condition of the throat will, as a rule at least, be found to have persisted, or possibly to have recurred. The evidence further showed that the infective principle of diphtheria can be retained by clothes, carpets, and other fomites for months, perhaps years. It appeared, also, that the infection of diphtheria may be derived from cases so mild that the patient never comes under medical treatment, or presents symptoms so little characteristic that their true nature is not recognized even after medical examination.

TYPHOID FEVER.—*Incubation period.*—The conclusions under this head are founded on 70 cases and various reports of epidemics. In 14 cases the infection was traceable to a single short exposure to the liability to infection; in 15 other cases the evidence showed that the period of incubation must have been less than 14 days. It is held that the period of incubation in typhoid fever may vary within rather wide limits. "The interval between exposure to infection and the development of distinct symptoms is probably most often 12 to 14 days; it is not very infrequently 9 or 10 days, occasionally 8, and possibly even less. In rare cases it is prolonged to 15, 18, or even 23 days."

*Conditions as to Infection.*—A case of enteric fever remains infective throughout the whole course of the disease, from the date of the earliest symptoms of illness until convalescence has been established for at least a fortnight. Evidence is afforded that infection can be conveyed by fomites, and retained in them probably for at least two months. Considerable space is given to a discussion of the conditions under which the infection of this disease is conveyed by water and by milk; it is found that an epidemic due to contamination of milk may be expected to cease at or about the end of the second week after the arrest of the contaminated supply. An epidemic due to contamination of a public supply from large reservoirs is found to come to an end, as far as the occurrence of new cases is concerned, as a rule, not later than the fourth week after the source of specific pollution has ceased. If the epidemic be due to the ingestion by a population of infected well water, the disease may continue in the community for a much longer period after the pollution has ceased, if the use of the well be continued.

EPIDEMIC INFLUENZA.—The number of instances available for the purposes of this report is somewhat restricted. The conclusions reached are as follows: (1) The incubation period varies from one day, or possibly a few hours less, to 4 or 5 days, but the usual period is 3 or 4 days. (2) A patient is capable of conveying infection throughout the whole course of the disease from the onset of the earliest symptoms, and even after convalescence has been sufficiently established to enable him to resume ordinary occupations a week or ten days, at least, after the commencement of his illness.

MEASLES.—*Incubation period.*—Owing to the uncertain duration of the period of invasion, it was found necessary to take the day of the first appearance of the rash as the fixed date from which to calculate. The report contains 36 instances in which the exposure to the source of infection was for a short known period, only a few minutes or hours. In 19, or 52 per cent. of these cases, the subsequent interval before appearance of the rash was exactly 14 days. In 28, or 78 per cent., the period was 13, 14, or 15 days. In 3 cases only is the period believed to have exceeded 15 days. The evidence afforded by cases in which the period of exposure was not precisely limited, confirmed the conclusion that 14 days is the usual period between the exposure and the appearance of the rash. Intervals of 16, 17, and 18 days probably occur occasionally, and in considering the question of the isolation of susceptible persons who have been exposed to infection, the possibility of such periods cannot be left out of account. In rare cases the interval may be as short as 7 days. The duration of the primary or catarrhal stage is not constant, and does not bear any relation to the total duration of the interval between exposure and eruption. It is concluded that the true incubation period of measles, that is, the interval between exposure and the earliest symptoms, is, in a majority of cases, 9 or 10 days, but may be as short as 5, or even 4 days, and as long as 14. A susceptible person who has been exposed to the infection of measles must be kept under observation for a full fortnight, and be found free from fever and catarrh at the end of that period before it can be said that the disease has not been contracted.

*Period of Infectivity.*—Cases are quoted to show that measles is infectious not only during the primary stage and throughout the acute attack, but also in some cases after convalescence has been well established, but no period beyond three weeks after the appearance of the rash was met with where disinfection was practised. There was evidence that the infection may be retained by fomites for a short time.

MUMPS.—*Incubation period.*—The incubation period of mumps is generally said to be 2 or 3 weeks, but the committee found that it approaches more nearly, as a rule, to the latter than to the former. In 14 cases of single short exposure the interval was three weeks, a day or two more or a day or two less in 10. From a study of a large collection of cases in which the date at which exposure ceased was known the conclusion is reached that the interval between the exposure to the source of infection and the onset of parotitis is most commonly about 3 weeks, a day more or a day or two less. It is occasionally as long as 25 days, and more rarely as short as 14 days.

*Period of Infectivity.*—The chance of infection diminishes progressively from the onset of the parotitis, and has ceased in 2 weeks probably, and in 3 weeks almost certainly; it is very infectious during the prodromal stage, which is of uncertain duration, and may last as long as 4 days. Since a person who is about to suffer from mumps is not infectious until at most 4 days before the parotitis appears, it is possible, by quarantining a person first seen 10 days after his exposure to infection, to ensure that he shall not infect others; further, since the incubation period is most commonly 19 to 21 days, and is sometimes 25 days, it is well worth while to quarantine a person who has been exposed to infection a fortnight or even 3 weeks earlier.

RUBEOLA—RÖTHELN.—*Incubation period.*—The opinion is expressed that the incubation period of rubeola varies very considerably; the twelfth to the eighteenth day after the cessation of exposure is the time at which the rash is most likely to appear in epidemics in schools when a patient is isolated as soon as the rash appears. On the whole, the conclusion is that the incubation period of rubeola is, as a rule to which there are many exceptions, some period more than 2 and less than 3 weeks, and that 18 days is probably the usual period. In a considerable number of cases it is a day or two less than 2 weeks, in a few it is only 8 or 9 days, and it is possible that, in a small number, it may be as short as 6 or 5 days. Since a person who has been exposed to the infection may not develop the disease for three weeks, or even 22 or 23 days, the quarantine period must be not less than the longer of these.

*Period of Infectivity.*—The patient is infectious 2 or 3 days before the rash appears, and also while the rash is out, but thereafter infectivity diminishes rapidly, and ceases altogether in a week in mild cases, and by the time desquamation is over in the more severe; in the former class isolation for a week, followed by a bath, and disinfection of clothes; in the latter isolation for a fortnight, followed by disinfection, is recommended to prevent the spread of epidemics in schools. At the same time, it is pointed out that there is little evidence that the infection is long retained by clothes.

SCARLET FEVER.—This chapter of the report is founded on the study of nearly 140 cases and many reports of epidemics.

*Incubation period.*—In 34 cases the exposure to infection was for a short period measured by minutes or at most hours, and in 12 of these the incubation period cannot have exceeded 48 hours. In 19 cases, or more than half, the incubation period was some period less than 3 days, and in no case was the appearance of the eruption delayed beyond the eighth day. If to these cases be added certain others in which the exposure to infection began at a known date, and continued thereafter until the symptoms developed—cases in the same house, for instance—then a total of 106 cases is obtained, which is divided as follows:

5 cases were attacked within the first 24 hours.
23 cases were attacked within the second 24 hours.
24 cases were attacked within the third 24 hours.
18 cases were attacked within the fourth 24 hours.
10 cases were attacked within the fifth 24 hours.
12 cases were attacked within the sixth 24 hours.
9 cases were attacked within the seventh 24 hours.
5 cases were attacked within the eighth 24 hours.

Examination of the facts in connection with these cases leads to the final conclusion that the incubation period is usually some period between 24 and 72 hours; it is occasionally less than 24 hours, frequently more than the longer limit above mentioned. Periods of 4, 5, and 6 days are often to be met with, and of 7 days occasionally, but it is very doubtful whether the period of incubation is ever extended to 8 days. When the infection is conveyed in milk the period would seem to be, as a rule, short—2 days or less.

*Period of Infectivity.*—Infection persists from the onset of symptoms until long after convalescence has been established; certainly as long as there is any desquamation, and may still be active 8 weeks after the onset of the disease. It is readily preserved and conveyed in fomites.

*Quarantine.*—A person who has been exposed to the infection of scarlet fever, if, at the end of 7 clear days, he is free from fever and from sore throat, and does not show any signs of illness, may, after disinfection of his clothes and other fomites, be pronounced safe.

*Surgical and Puerperal Scarlet Fever.*—There is no proof that the period of incubation is shorter or longer in persons who have met with an injury, nor in women who have recently been delivered, but there are grounds for believing that the occurrence of labor or of traumatism may determine the onset of scarlet fever in persons who had previously been exposed to infection without taking the disease.

The infection of scarlet fever may be conveyed by persons who do not themselves suffer, doubtless in their clothes; but further, the symptoms of scarlet fever may be very anomalous or very little marked, and, especially in the adult, may consist only of sore throat; the infection of the disease is peculiarly apt to be distributed by such cases.

VARIOLA.—*Incubation period.*—The incubation period of small-pox is commonly 12 days (from exposure to initial symptoms), but is not very infrequently a day more or a day less. It is occasionally only 9 or 10 days, and sometimes 14 or perhaps 15 days.

*Period of Infectivity.*—Small-pox is infectious from the onset of the initial symptoms, and until all scabs have cleared off, but it is very much more infectious during the height of the active stage of the disease than during the initial illness, so that isolation at the time of the first appearance of the rash may be practised with a considerable expectation that the spread of the disease will thereby be prevented or diminished. The infective principle can be retained and conveyed by fomites, and by the hair of a person who has been in intimate relations with a patient suffering from small-pox.

*Quarantine*—The period of quarantine ought to be 15 days; if, at the end of that time, the person who has been exposed to infection shows no signs of indisposition, and presents no elevation of temperature, it will be safe to conclude that the infection has not been contracted.

VARICELLA.—The incubation period of varicella appears to be a little longer than that of variola. It is usually 14 days, but may be a day less or 4 or 5 days more. The infection may be derived from a patient at least as soon as the rash appears. A convalescent patient may convey the infection to others. The infection may probably be conveyed in clothes.

## AMERICAN MEDICAL ASSOCIATION.

**Membership in the American Medical Association.**—"This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues and subscription for the *Journal.* Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership. On receipt of the above amount the weekly *Journal* of the Association will be forwarded regularly."

**Change of Date of Meeting—Official Notice.**—The following notice appears in the Association *Journal* over the signatures of the President and Secretary: "In order to enable the State Medical Societies to send instructions as to their action in the matter referred to them by the American Medical Association at its recent meeting at Milwaukee, and for other reasons, the time of meeting of the Association at San Francisco has been changed from the first Tuesday in May to the first Tuesday in June, 1894." As we have already stated a change in the date of the meeting had been urged, but it was supposed that this would still be in May. The date now announced is rather later than we would have selected for seeing California to advantage. Unless the season be a late one the green refreshing garb of spring will have faded to the sunburnt tints of our rainless summer, and in the interior hot days may be encountered. Sacramento, however, will be looking her very best, for in no month more than in "the month of roses" does the Capital show to such advantage. As for San Francisco, the months or seasons make no difference there. The climate, or rather weather, is much the same at all times. It is a good, hard working, vigorous and stimulating atmosphere; but more than this it would not be truthful to state.

**The Medical Sentinel,** of Portland, Oregon, formerly *Pacific Medical Record*, says: After a lapse of 24 years the American Medical Association will again honor San Francisco with its annual meeting next May. The attendance from the Eastern States will no doubt be many times larger than at the former meeting. The medical profession of this northwest region should unite with our California brethren so that our visitors will feel that they are being welcomed by the physicians of the whole Pacific coast. We can show our interest in the Association by becoming members in advance of the coming meeting, and then our greeting to our brothers from across the continent will be more cordial, for we will feel that we have a double interest in them. Any member in good and regular standing of any State or county society can become a member of the American Association by application to the Treasurer, accompanied by a certificate from his local society. Each member will receive the *Journal of the Association*, which the Trustees aim to make the best medical weekly in the country.

## SOCIETY PROCEEDINGS.

### SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

*Regular Meeting, October 24, 1893.*

The President, F. L. ATKINSON, M. D., in the Chair.

**Radical Cure of Hernia.**—DR. C. B. NICHOLS introduced this subject for discussion. He said: The operation was formerly considered a matter of convenience, but we do not now regard it as such. It should be recommended and urged, as we can almost guarantee recovery as well as a cure. This work can only be done successfully by men who embrace surgery in its highest sense. All the modern antiseptic precautions should be observed. Many operations had been devised, but any procedure should be carried out with the object of getting rid of a truss, as to this was due, in the opinion of the speaker, a return of the trouble in many cases.

DR. G. L. SIMMONS: Had had no experience in this operation except where symptoms of strangulation were present. These cases had been successful. The statistics would certainly bear out the author in his conclusions.

DR. T. W. HUNTINGTON: Dr. Marcy's work covers this ground very completely. I have had my attention called to this subject and have been an occasional operator, during the past five years. All my cases have recovered, not one of them wearing a truss. I do not regard the operation as one of convenience, but as one of necessity. Each individual case must govern itself in regard to the method of operation. As a rule it is divided into two classes, the open and closed. McBurney exposes the cord and vessels, attaches the skin to the pillars of the ring, packs the wound with iodoform gauze, and expects healing to take place by granulation, thus forming a new passage, and a cicatricial plug. This plan has been attacked by Dr. Bull, who advocates a closed method. He says the cicatricial plug becomes attenuated and the recurrence is worse than the original trouble. The operator should forget his exact anatomy as laid down in the books, as it is a mistake to be looking for the various layers. One should get to the sac as quickly as possible. Sir Astley Cooper, in his teaching, spoke of only two coverings, *i. e.*, tunica adventitia and propria. There is nothing in the nutrient supply that needs special attention. In the treatment of the sac, begin at the external ring and dissect it down; open and look in before ligating. In twenty cases I have ligated the sac and sutured the pillars with catgut or silk. The tying off of the sac accomplishes the cure, and almost any plan of closing the wound may be pursued. No operation is trivial, but I have never refused to operate for radical cure of hernia when requested.

DR. F. R. WAGGONER: In the spring of 1865 I was called to attend a case twenty miles in the country. Upon arriving at the house I found the man, who was about 60 years of age, suffering from a strangulated hernia. With nothing but a pocket case, and by the aid of a light furnished from a tallow candle, an incision was made, and a loop of intestine, together with a portion of omentum, found to be down. The gut was reduced, but it was found impossible to return the omentum. The wound was closed with the omentum in the ring. Union occurred by first intention. This is my only case and I presume the omentum prevented the descent of the gut.

Dr. C. B. Nichols, in reply, said that he had intended to present a case upon whom he had operated a few weeks ago. The method he adopted in this case was as follows: After dissecting down to the external ring you carry the incision from the internal ring directly upward two inches; there stitch the sac to the edge and close the external wound with crossed and buried sutures. Theoretically the disposal of the sac by ligation at the internal ring leaves a depression which allows the contents of the abdominal cavity to make pressure at that point; by closing above the ring you introduce a safeguard. The sutures through the peritoneum add but little to the gravity of the operation and materially aids its future success.

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## SAN FRANCISCO COUNTY MEDICAL SOCIETY.

*Regular Meeting, November 14, 1893.*

The President, H. H. Hart, M. D., in the Chair.

**New Members.**—F. J. Hund, M. D., H. W. Fenner, M. D., and Oscar J. Mayer, M. D , were duly elected members of the Society.

**Melano-Sarcoma of Conjunctiva and Cornea.**—Dr. A. Barkan presented a woman, 50 years of age, the mother of several children, who gave a history of some trouble with the right eye for the past ten years. She first noticed a small, red-like spot on the outer lower corner of the eye-ball. During the last half-year it has increased rapidly in area and appears now as a chocolate-colored growth around the outer three-fourths of the cornea. The growth is about four lines in breadth, though somewhat irregular. It is rich in blood vessels. It has not penetrated the sclerotic. The black spot appears in the cornea as about the size of a lentil. There is no pain. It spreads over the pupil so as to interfere with vision, there being only $\frac{1}{5}$ of normal vision in the right eye. A fresh hemorrhage has occurred in the growth since it came under the speaker's care and observation. The limbus of the conjunctiva was probably the origin of the growth. It might be a question whether it is a melano-sarcoma or an epithelioma, but he thought it was clearly a sarcoma and developed slowly. It is very apt to recur, no matter how thoroughly it may be removed.

Dr. Barkan also exhibited a lamp with lens, etc., for eye examinations or for convenient use of the physician, as it can be readily carried in the pocket to patient's residence, hospital, etc.

**Epithelioma of Conjunctiva.**—Dr. A. H. Voorhies also presented an interesting case of eye trouble. Patient had an epithelioma removed from the left cheek 20 years ago, by Virchow. This, after healing, caused, from contractions, an ectropion of the lower lid of the left eye. About 2 years ago patient had a growth removed from the outer side of the left eye-ball, and Dr. Voorhies, a short time ago, removed a recurrent growth, almond shaped, with the base toward the pupil from the same region of the left eye. It is not yet entirely healed, but it is gradually doing so. The microscope confirmed the diagnosis of epithelioma.

Dr. Voorhies, in commenting upon Dr. Barkan's case, said he had never seen a melano-sarcoma in this region, involving either eye-ball, cornea or lids. He thought, however, that there was no doubt about the diagnosis. When located in the eye, he thought that after removal it is the least likely to return of any portion of the body. He advised enucleation of whole left eye-ball and surrounding tissues.

**Election of Officers.**—Election of officers for ensuing year resulted as follows:

President ---------- Wm. Watt Kerr
First Vice-President ---------- H. E. Sanderson
Second Vice-President ---------- H. M. Sherman
Recording Secretary ---------- A. P. Woodward

Corresponding Secretary——L. M. F. Wanzer
Treasurer——W. S. Whitwell
Librarian——D. W. Montgomery
Trustees——H. Gibbons, Jr., W. F. McNutt, Jas. Simpson
Committee on Admissions——H. H. Hart, T. B. DeWitt, G. F. Shiels, J. M. Williamson, G. W. Davis.
Committee on Medical Ethics——J. Simon, C. C. Wadsworth, F. Z. Bazan, O. V. Thayer, G. W. Merritt.
Committee on Finance——H. M. Sherman, G. W. Merritt, T. J. Le Tourneux
Committee on Publication——D. W. Montgomery, C. C. Wadsworth, G. W. Fuller.
Executive Committee——J. H. Barbat, W. F. Cheney, C. G. Kenyon

## CALIFORNIA ACADEMY OF MEDICINE.

*Regular Meeting, October 21, 1893.*

The President, Luke Robinson, M. D., in the Chair.

**Cured Aneurism of the Abdominal Aorta, Treated by Loreta's Method.**—Dr. J. F. Morse: I have here this evening a man upon whom I operated for an aneurism of the abdominal aorta, in 1890. The case first came under my observation in the City and County Hospital, with Dr. Abrams. At that time the aneurism was about 2 inches in transverse and 4 inches in vertical measurement, and extended to the left and slightly above the umbilicus. At the upper border of the swelling there was a very soft, fluctuating spot, which could easily be made out through the abdominal walls. The case was removed from the City and County to the German Hospital. In September, 1890, in the presence of several medical gentlemen, among whom was Dr. Kalloch, of the U. S. Marine Hospital, the patient was etherized, the abdomen opened and the sac exposed. At the upper portion of the aneurism the walls were very thin. A needle was plunged into the tumor and 28 inches of fine silver wire were introduced. On removing the needle, the wound bled profusely and could not be stopped by carbolic acid, as is recommended. Dr. Kalloch suggested that the bleeding point be seized with forceps and thus controlled, but I was loth to do so, being afraid of tearing the walls. A quantity of Monsel's salt was applied, which stopped the hemorrhage at once. The abdomen was closed. The patient was in bed three weeks; recovery took place, though the pulsation did not cease entirely. Six months after the operation, the patient was taken with severe pain in the back, and went to the Marine Hospital, where he was treated by iodide of potassium, rest in bed and a low diet. I lost track of him till a few days ago, when he came to my office. Dr. Abrams is present this evening, and can, no doubt, corroborate my statements, and, possibly, give us more information on the case. The principal point in this case was the thinness of the sac, and the great difficulty encountered in controlling the bleeding. There was no fever following the operation; the wound healed nicely.

Dr. A. Abrams: I have nothing in particular to add to what Dr. Morse has said. I do not recall the case very well. In aneurisms, both thoracic and abdominal, we have, almost out of tradition, ordered iodide of potassium and rest, combined with a low diet. I believe, too, that a large number of the cases occur in syphilitic persons, and that there exists, in all probability, an arteritis or gummatous arteritis; the iodide of potassium removes this, and also acts as a muscle poison on the heart, thus reducing its force.

Dr. W. Watt Kerr: I would like to ask Dr. Morse whether his case was due to traumatism or to a degenerated condition of the vessels. As far as my experience goes in this operation for aneurism, those resulting from traumatism gave better results than those depending upon degeneration of the vessels, syphilitic or otherwise.

Dr. Morse: In this case the history pointed to a traumatism; patient complained, after lifting, of a pain, and after this, of a swelling of the abdomen. This man was a most undesirable case to operate on; very intemperate, drunk for months at a time. Even after the operation he got drunk, was arrested, got out of jail, went to the Marine Hospital, and was discharged from that institution on account of intemperate habits.

Dr. D. W. Montgomery: Cruveilhier, in his atlas, gives some very fine plate of aneurisms, one of which resembles closely the case, brought in by Dr. Kerr of four aneurisms of the arch of the aorta. We frequently run across another aneurism, due to syphilis, that occurs in the basilar artery, and which is generally fusiform. Dr. Tait has also had a case. From the case under my observation, I made some slides, which showed beautifully how the arteritis obliterans probably preceded the aneurism. It also shows the elastica. The endarteritis rendered the calibre of the vessel pin hole in size, and, by softening the elastica and other coats, formed a balloon-like distension. The patient fell in a fit, and died in a short time. This shows that we are justified, especially in young men with no atheroma, in putting them on iodide of potassium. Dr. Morse's case says he had a sore in 1877. How often we meet with soft sores followed by syphilis. In dispensary practice, a man came to the surgical clinic who had been on a spree and had run a piece of glass behind the scapula. It was difficult to remove, and this was accomplished only by working with the fingers. A short time after this, he came to my clinic, giving a history of piles. On examination I found condylomata He had only the scar and a history of a soft chancre, and a swelling, but no suppuration in the groins. No skin symptoms, no glandular enlargements; simply the condylomata. I then realized how near I had been to contracting the disease while digging out the piece of glass. A case, brought to my notice lately, was that of a man with a plain tubercular syphilide on the forehead, and a history of a soft sore 20 years before. At that time he was treated at the French Hospital for 15 days, only showing that they, too, supposed it to be a soft chancre. This man married and has a child, perfectly healthy.

DR. MORSE: In answer to Dr. Kerr, I do not think it makes any difference whether the aneurism is from traumatism or anything else. We know that most always the result of medication is *nil.* I believe that the number of aneurisms cured by iodide of potassium and rest are very few and far between, and I do believe that abdominal aneurisims may in some cases be cured by operation. We have the tumor there and it is a simple mechanical proposition, introducing a foreign body to produce a clot. In the cases quoted, the patients were not killed, one case was cured for a number of years when a secondary aneurism developed, bursting into the transverse colon. I have the specimen and intended to show it to the Society, but as proper care is not taken of the specimens, I believe it too valuable to risk its loss; it shows the old sac completely stopped and the wire can be seen *in situ.* It makes only a relative difference to my mind what the cause is, the sac is there and must be destroyed, and in introducing wire we simply do it mechanically.

DR. MONTGOMERY: Iodide of potassium in syphilitic cases does most good; of course it cannot contract the aneurism nor can we overcome the aneurism by its use. I had reference simply to the nature of the trouble when iodide will check complications by preventing a further softening of the wall.

DR. G. B. SOMERS: This case is very interesting. I should like to ask Dr. Morse what degree of danger he considers there is regarding emboli when large arteries are ligated for aneurism.

DR. MORSE: Attempts to obliterate the sac of a thoracic aneurism are liable to be followed by dangerous emboli in the head; in abdominal aneurisms, thus far, it seems not so liable to occur, at any rate some ten or twelve were reported by Verneuil, and with the exception of my own, were not followed by it. In the first case operated by me there was a thrombosis on the left side, a swelling of the leg, and a diminished pulsation throughout the whole limb; this in time disappeared entirely.

DR. KERR: The most favorable part for operating is the ascending portion of the arch of the aorta, because there is no unhealthy vessel behind the aneurism; it is, however, the most dangerous place for a clot, as we get great pressure there. As to iodide of potassium, we should not ignore it altogether. It is a good preparatory treatment where the aneurism is due to syphilitic causes; it produces a healthier condition of the arteries. As to the favorable prognosis in traumatic cases, I do not say "don't operate if syphilitic," but I do say that we get better results from operation where patients are not syphilitic. Where there is an extensive degeneration of the vessels and we operate, a secondary aneurism is liable to form, as in the case reported by Dr. Morse. I do not think that traumatism, without some previous degeneration, can cause aneurism.

**Pneumonia Without Characteristic Symptoms.**—DR. H. E. SANDERSON: I would like to report a case of pneumonia that came under my observation lately, in which the symptoms were very peculiar. There was no typical chill, complete consolidation of lower lobe, no dyspnea, respiration only once reaching 23, and generally 20–21, there was no fever to speak of, the temperature only once reached 103° and being generally 101° or less. There was, however, the characteristic sputa which showed under the microscope numerous diplococci. I only speak of this to show that we may have a grave disease with but few of its characteristic symptoms.

**Dr. A. F. Sawyer.**—DR. MORSE: We have with us to-night, after a long absence, Dr. A. F. Sawyer, the founder of the Academy of Medicine. I am sure we would like to hear a few words from him.

DR. A. F. SAWYER: It gives me great pleasure to be here with you at this meeting. Many, or most of you are strangers to me, and I take more than a passing delight in the evidences of success that I cannot help but notice. One thing that I do notice, is that most of the newer members have a full covering on their heads. The old members are passing away. From this, then, we may draw the conclusion that the Academy has many years of useful life before it. It is with pleasure that I see how well organized and kept up the Academy has been, and that, too, would show a bright and prosperous future. At present I am not in the best of health and cannot become, as before, active, in the Academy, but should I remain here any length of time and my health improve, I shall with great pleasure assume my old time activity.

DR. MORSE then proposed the following resolution, which was carried unanimously: That it is the sense of the Academy that we should be extremely happy to receive the founder of the Academy in our midst, and sincerely hope that his health may be restored and that we will hear his voice in these halls as of yore.

DR. BACON, of Chicago, when called on, said: Regarding the Academy of Medicine I may say that in Chicago we think we have some very smart Societies; our Medical Society of the city has a membership of 300 or 400, but we have no home of our own, and on glancing around your elegant apartments I am reminded of our poverty in that respect.

## SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

*Regular Meeting, October 2, 1893.*

DR. F. Z. BAZAN in the Chair.

**New Members.**—W. C. RILEY, M. D., A. A. O'NEILL, M. D., and GUSTAV MAHÉ, M. D., were duly elected members of the Society.

DR. EMMET RIXFORD read a paper entitled "Lateral Curvatures of the Spine." (Published at p. 659.)

DR. L. C. LANE read a number of extracts from Eulenburg's monograph on scoliosis, in which the relations of the bony and muscular elements of the back were brought out. He called attention to Eulenburg's method of treating most cases of scoliosis by massage, galvanism, and Swedish gymnastics, without the use of artificial supports. He referred to the experiment of Guérin, by which torsion was demonstrated in a rod of wood provided with a ridge on one side corresponding to the row of processes on the vertebræ, when it was bent laterally by end to end pressure.

DR. C. N. ELLINWOOD said that at the present time he had under his care a case of scoliosis, which had been treated intelligently and persistently by electricity, massage, and gymnastics, with only indifferent success. When the patient came to him he put her in Wolf's cradle, which consists of a frame, from which a band of webbing is so hung that when the patient is laid on it the rib prominence sustains most of the weight of the trunk. The rotation was rapidly diminished and in time entirely overcome, so that after four or five months of treatment with gymnastic exercises, the cradle being used at night, it was thought a cure was effected. The child went to the country for several months and came back as badly crooked as before. He then had made a brace which gave support, but he still used the cradle at night, with the result that there is again a marked improvement in the patient's condition.

**Dr. Albert Abrams** said that he had had but little experience with scoliosis surgically, but from a medical standpoint he could speak of frequent observations of physiological scoliosis. Formerly this was supposed to be due to pulsations of the aorta on the left side, but this explanation was refuted by the occurrence of scoliosis dextra in some cases with reversed viscera. It had occurred to him that the lungs might cause scoliosis in some cases, for in the presence of atelectasis displacement of the thoracic organs was frequently observed accompanied by scoliosis. This scoliosis disappears after the lung is properly developed.

**Dr. F. Z. Bazan** said there were a number of circumstances connected with the pathogenesis of scoliosis, which were of importance with reference to prophylaxis. During the life of the child there were notable humeral alterations, the result of improper nutrition; the acquisition of lime and phosphorus was interfered with. The child is perhaps taken from the breast too soon, causing gastro-intestinal disturbances, resulting in the poor elaboration of phosphate of calcium. The feces are green and acid. There is an acid condition of the juices of absorption, preventing proper deposition of salts in the bones. A similar condition also occurs as a result of too late nursing; the child does not find in the mother's milk proper material for bone making. Deformities in the spine and other bony parts, notably about the epiphyses are the direct result of these conditions.

## SPECIAL CORRESPONDENCE.

### LONDON.

[FROM OUR OWN CORRESPONDENT.]

*Introductory Addresses.—Pessimism and Biology.—Preliminary Education in Arts.—Quacks.—Opium Smoking.—The Sporadic Cases of Asiatic Cholera and the Water Theory.*

The medical session has been opened with the usual introductory addresses at some of the schools; the practice has been given up at many, and has been, as a rule, replaced by other and less formal ceremonials. Even those schools in which it is retained find it desirable to have an "old student's dinner" or some other social gathering, where old and young can meet for once on common ground and renew or form acquaintance. It is excessively difficult to find anything to say to the student which shall be at once appropriate and novel. Some orators, as Sir J. Crichton Brown, at Sheffield, on the present occasion, boldly deliver a discourse on a topic of general interest, obviously addressed, not to the audience of students, but to the world at large. His subject was ostensibly biology and ethics, but the address would have been better described by the title, biology and modern pessimism. It was an agreeable dissertation, but might, with more appropriateness, have been addressed to a Friday evening audience of dilettante scientists at the Royal Institution. Mr. Pearson has been exercising the minds of some small philosophers with speculations as to the future of the white races; he agrees with the hero of Bret Hart's ballad that the Caucasian is "played out" and that we have but to sink into a state of Chinese quietude. "Life will be prolonged and health improved, but this will simply mean a redundancy of old people and an excess of senile caution and timidity. Ambition and the quest of fame are to cease to be incentives to action in the stable and equable order of society that is in store for us, and while human character becomes weak and fibreless, and the race, impoverished in vital power, loses interest in all but its daily needs, the last remnant of belief in progress of any kind will expire." Sir Crichton Brown, however, will not accept Mr. Pearson's arguments, drawn from the alleged limitation of the future achievements of experimental research, and raises the question, a question of first-rate importance, not only for this country, but for Pan-America, whether the power of the higher races, by which he means, of course, our noble selves, has not been underestimated. Sir Crichton Brown is optimistic, though, as a neurologist and alienist, he cannot fail to admit that "the strange prevailing malady of the present day," to quote the words of a quack-medicine advertisement, is melancholia, "*ennui* is epidemic. The type of insanity has changed, and our asylums contain far fewer raving exuberant maniacs than they used to, but a far larger number of miserable melancholics."

Dr. William Pasteur, at the Middlesex Hospital, was more practical in the choice of a subject, for he put his finger on the defect in our system of education, which all thoughtful men have become convinced is the grand defect and the cause of nearly all the degrading practices and ignorant emp ricism, which bring the profession into discredit and threaten to lower it to the level of a trade. He condemned the present standard of preliminary education as too low. We are making yearly increasing demands on the intelligence and industry of medical students, and if these are to be met we must have some improvement in the "raw material" sent up to the medical schools by the middle-class schools. The General Medical Council now requires a five-years' graded course as a minimum after admission as medical student, and it has taken some steps toward raising the standard required at the examinations in preliminary education. It has condemned the examinations held by the Apothecaries' Hall, in London, and the College of Surgeons, in Dublin, but has been met by defiance. The next move will be watched with some anxiety, as it is feared that the Council will not have the courage to carry on the attack, while the interests of the two corporations, or, at any rate, their apparent interests, will lead them to fight to the bitter end. Probably the only satisfactory solution will be to require from every medical student a degree in Arts, obtained from a recognized University. Meanwhile, quackery is rampant and prescribing chemists abound. The prescribing chemists retort that "doctors" keep open shops for the sale of drugs and even of patent medicines, and this, to a limited extent, is true. As to the quacks, they will always be with us, but it appears to be possible, by putting the existing laws into motion, to do a good deal more to make their trade dangerous and unprofitable than used to be supposed. Moreover, a certain amount of public opinion has been aroused. In particular, with reference to one vendor of electric appliances, so-called, whose advertisements have been wide-spread and bare-faced, the action of the *Times* is likely soon to have an imitator in the person of an American millionaire.

Last spring a select committee of the House of Commons was appointed to inquire into the present system of registration of deaths. The committee was presided over by Sir Walter Foster, M. D., who is Parliamentary Secretary to the Local Government Board, as well as a physician practising in Birmingham. The report of the committee, which has been issued recently, points out the defects of the existing law. The great blot on the system is the large proportion of uncertified deaths. Theoretically, no body can be buried without a certificate from a medical man stating the cause of death, but in practice, if this is not forthcoming, the registrar accepts the statement of anybody and registers the death as uncertified. The popular interest, such as it is, in the question depends upon the belief that children whose lives have been insured, especially illegitimate children, are permitted to die. At present, a medical man who gives a certificate of the cause of death is not required to certify the fact of death, but the committee propose that in future this obligation should be laid on him, and that he should receive a fee of half a crown. The committee proposes, also, that in every district "medical certifiers" should be appointed, to make inquiries in every case in which a medical certificate is not forthcoming, and to make a *post-mortem* examination if not satisfied. If satisfied that the cause of death was natural, the medical certifier should give a certificate; if not, he would report to the coroner. The main objection which is likely to be raised to the proposals is the financial one, for the fees would amount to at least £70,000 a year.

A Royal Commission on the opium trade has been taking evidence, of the most contradictory kind, in London, before proceeding to India. The Anti-Opium Society tendered evidence, of missionaries and others, to the effect that the habit of smoking opium was destructive to body and mind, but a good deal of evidence was given, by persons of experience, to the general effect that opium smoking was not so injurious as dram-drinking, but was rather to be compared to tobacco-smoking. Upon one point the evidence is most conflicting; namely, whether the use of opium is advantageous as a prophylactic of malarious disease. It is said to be used with good effect for this purpose in certain parts of India, but such use in China is denied. American experience on this point would be very interesting to us at the present time. It is a curious fact that the only district in England where, so far as I am aware, the taking of opium is a general habit is the Fen district, where ague lingered longest, and where it is not yet quite extinct. The local grocers and chemists in that district sell pennyworths of opium, either pure or mixed with some indifferent substance to give bulk. The quantity sold on market nights in quite small towns is astonishing; and I was informed by one of these shop-keepers that only the best kind of opium could be sold, his customers being quick to detect the substitution of any inferior quality.

Mention must be made of the occurrence of Asiatic cholera in England for the first time for many years. The mode in which the disease was introduced is at present uncertain, though it is probable that the first sufferer was a stewardess of a steamboat, trading between the Humber and Antwerp; the mode in which the disease has been disseminated is far more mysterious. In Grimsby, which has suffered most, it is probable that imperfect drainage may have led to specific fouling of cellars and basements, and so of articles of food, if not of the water supply. The latter supposition appears to be negatived by the extremely small number of cases, and the long intervals of time between them. Cases have occurred here and there throughout the country; but here again, with one exception (a very small epidemic at Ashburne, due to pollution of a well used by a group of cottages), there seem no good grounds for saying that the dissemination was due to water directly. Grimsby is one of the chief fish-distributing centres for England, and the only suggestion which has yet been made to account for the sporadic cases is that the sufferers may have partaken of uncooked shell-fish which had become contaminated by the fouled water of the Grimsby docks. In only one case has it been proved that the sufferer had visited Grimsby.

LONDON, November 3, 1893.

# REVIEWS AND NOTICES.

AMERICAN TEXT-BOOK OF GYNECOLOGY. W. B. Saunders, publisher. Philadelphia, Pa. Announces this work as ready for early issue. It is the joint work of Drs. Howard Kelley, Pryor, Byford, Baldy, Tuttle, and others, who stand before the profession for all that is progressive in gynecology. The work will contain operations not before described in any other book—notably ablation of fibroid uterus. It is designed as a profusely illustrated reference book for the practitioner, and every practical detail of treatment is precisely stated.

INTERNATIONAL CLINICS.—In recent reviews of these publications the price was quoted as $1 per volume. This was an error of some moment, which we take the first opportunity of correcting. The prices are per volume, cloth, $2 75; half leather, $3, or per year or series of four volumes, $11 and $12. These prices are necessitated by the character of the work, which is purely original and exclusive, and therefore procured at a considerable primary outlay. It is also proper to add that the work is perfectly legitimate, the appearance of every article being authorized, and there is no piracy about it.

THE MEDICAL REVIEW VISITING LIST PERPETUAL.—This is one of the many candidates for favor amongst the visiting lists. It is compact, and has less of the usual padding that accompanies these publications. The matter that has been included is useful and such as may be required in an emergency when references are not available. We note that the table of contents for this year has not been revised. The price is 75 cents, postpaid. J. H. Chambers & Co., of St. Louis, are the publishers.

SYSTEM OF DISEASES OF THE EAR, NOSE AND THROAT. By eminent American, British, Canadian and Spanish authors. Edited by Charles H. Burnett, A.M., M.D., Emeritus Professor in the Philadelphia Polyclinic and College for Graduates in Medicine; Clinical Professor of Otology in the Woman's Medical College of Pennsylvania; Aurist to the Presbyterian Hospital, Philadelphia. Illustrated. Complete in two imperial octavo volumes of about 800 pages each. Philadelphia: J. B. Lippincott Co. Vol. I. p.p. xviii—790. Cloth, $6.00; full sheep, $7.00; half Russia, $7.50.

The first volume of this work consists of nearly eight hundred pages of monographs by twenty-three different authors, covering the field of diseases of the ear, nose and naso-pharynx. The history of ear diseases makes it obvious to the most casual observer that a large proportion of aural affections are secondary to some departure from the normal condition of the naso-pharyngeal cavity. The editor fully realizes the necessity of every aurist being thoroughly competent to diagnose and treat the most common conditions productive of aural disease, as he has brought together in this system of Diseases of the Ear, Nose and Throat almost all that is important and modern in these branches of medicine and surgery. The peculiar features of this work are, first, having twenty-three different authors, who are specially qualified on some special topic. As these monographs are uniformly good, this plan materially adds to the value of the work. It affords opportunity for those who have done good work in any line to give a large number of readers the benefit of their experience. The feature of bringing the important facts in diagnosis and treatment of the various diseased conditions, which depend so much upon each other, into one system is also a step in advance. Our knowledge of otology and rhinology has undergone such a rapid transition during the past decade that a modern work upon the subjects is very acceptable. The monographs on "Removal of the Stapes in Chronic Catarrhal and in Chronic Suppurative Otitis Media," by Dr. Jack, and "Acute and Chronic Inflammation of the Mastoid Portion of the Temporal Bone," by Dr. Blake, will be found of particular interest, both to the specialist and to the general practitioner. Taken as a whole, there is little in the work that cannot be commended. The discussion of important details has, perhaps, been treated too briefly, but the authors give only what they have found by experience to be best. It can therefore be followed as a thoroughly practical and complete guide in practice.

THE ERA KEY TO THE UNITED STATES PHARMACOPEIA. Detroit, Mich.: D. O. Haynes & Co. Price, 25 cents per copy, postpaid.

This little book gives in a very condensed form all the vital information regarding the drugs and preparations of the new pharmacopeia, viz : A complete list of drugs and preparations; the common names and synonyms of each drug and preparation; the parts employed; the doses in both apothecaries and metric systems; the preparations in which the drug is employed. This last is especially valuable as the pharmacopeia omits all reference to dosage. Particular attention has been paid to the typographical arrangement of the matter. The official names are arranged alphabetically in black-faced type. The book is in vest pocket size, and will certainly be of great assistance to physicians in using the pharmacopeia and to pharmacists in dispensing.

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# MEDICAL NEWS.

## LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held November 7, 1893, the following physicians, having complied with the law and the regulations of this Board, were unanimously granted certificates to practise medicine and surgery in this State:

Clarke, Austin F., Lordsburg, N. M.; Kentucky School of Med., Ky., June 30, '92.
Gooding, Charles Ernest, Los Angeles; McGill Univ. Fac. of Med., Montreal, Canada; March 29, '84; Royal Coll. Surgeons, England, July 24, '84.
Keller, George M., Niles; Med. Dept. State Univ., Iowa, March 4, '74.
Lemon, Benjamin Heaton, Chicago, Ill.; Albany Med. Coll., N. Y., June 12, '55.
Mackechine, Charles Alexander, San Diego; Univ. of Glasgow, Scotland, July 30, ,'85.
Mackinlay, Robert, Santa Barbara; Univ. of Edinburgh, Scotland, Aug. 1, '87.
Mayer, Oscar J., San Francisco; Univ. of Berlin, Germany, Aug. 8, '91.
O'Connell, R. J. G., San Francisco; Cooper Med. Coll.. Cal., Nov. 12, '89.
Powell, John L., Pullman, Wash.; Med. Coll. of Ohio, March 5, '91.
Reynolds, Jacob Thomas, Napa; St. Louis Coll. of Phys. and Surg., Mo., March 28, '93.
Richmond, Elsinore; Detroit Med. Coll., Mich, July 10, '72.
Wetzel, John F., San Francisco; Med. Dept. Willamette Univ., Or., April, '89.
Williams, Moses Hilton, Los Angeles; Med. Dept. Victoria Coll., Canada, May 1, '67.
Williams, Ralph, Los Angeles; Coll. of Med. Univ. Southern California, June 8, '93.

CHAS. C. WADSWORTH, Secretary.

## Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army, from October 20, 1893, to November 20, 1893.

Leave of absence for one month is granted First Lieut. Charles E. B. Flagg, Asst. Surg., with permission to apply for an extension of twenty days. Par. 12, S. O., 105, Dept. of Cal., Nov. 7,'93.

First Lieut. Chas. Willcox, Asst. Surg., will proceed to Angel Island, Cal., and report to the Commanding Officer of that post for temporary duty, relieving Capt. Wm. R. Hall, Asst. Surg. Par. 1. S. O. 107, Dept. of Cal., Nov. 10,'93.

Asst. Surg. Wm. R. Hall, is relieved from duty at Angel Island. He will repair to, and take station in San Francisco from this date, for duty as Examiner of Recruits and Attending Surgeon at these headquarters. Par. 2, S. O. 107, Dept of Cal., Nov. 10,'93.

Capt. Wm. L. Kneedler, Asst. Surg., is relieved from duty as Examiner of Recruits at San Francisco. Par. 1, S. O. 108, Dept. of Cal, Nov. 11,'93.

Capt. Edward C. Carter, Asst. Surg. Vancouver Barracks, Wash., will report to Capt. F. A. Boutelle, 1st Cavalry for instructions, and accompany him to Clearwater county, Idaho. Upon the completion of this duty Asst. Surg. Carter will return to Vancouver Barracks, Wash. Par. 2, S. O. 211, Dept. of the Col., Nov. 12,'93.

The leave of absence granted Capt. Henry P. Birmingham, Asst. Surg., is further extended one month.

Lieut. Colonel Chas. R. Greenleaf, Dep. Surgeon-Generall, is relieved from duty in the office of the Surgeon-General of the Army, and will repair to San Francisco, Cal., and assume charge of the medical supply depot in that city, relieving Lieut. Col. Joseph P. Wright, Dep. Surgeon-General, who, upon being thus relieved, will repair to St. Louis, Mo., and assume charge of the medical supply depot in that city.

By direction of the Secretary of War, leave of absence for four months, is granted Captain Wm. Stephenson, Asst. Surg. U. S. Army.

The leave of absence granted Capt. H. P. Birmingham, Asst. Surg., is extended twenty-three days.

Capt. Everts, Asst. Surg., on being relieved from duty at Fort Robinson, Neb., is ordered to Whipple Barracks, Ariz., for duty, relieving Major Benjamin F. Pope, Surgeon.

Major Pope, on being relieved by Captain Everts, is ordered to Angel Island for duty, relieving Cap. Wm. R. Hall.

Captain Hall, on being relieved by Major Pope, will report for duty as Attending Surgeon, headquarters Dept. of Cal., and Examiner of Recruits at San Francisco, Cal.

Lieut. Col. Albert Hartsuff, Dep. Surg. Gen'l., is relieved from duty at Fort Omaha, Neb., and ordered to report in person to the Commanding General Dept of Cal., for duty as Medical Director of that Dept., to relieve Col. Jos. R. Smith, Asst. Surg. Gen'l.

Col Smith, on being relieved by Lieut. Col. Hartsuff, will proceed to Governor's Island, N. Y., and report in person, on Dec. 4, to the Commanding General Dept. of the East, for duty as Medical Director of that Dept.

The leave of absence granted Lieut. Col. Johnson, V. D. Middleton, Dep. Surg. Gen'l. is extended fifteen days.

Major Louis M. Maus, Surg., is relieved from duty at Whipple Barracks, Ariz., and ordered to Fort Sam Houston, Tex, for duty, relieving Major Calvin DeWitt, Surgeon.

### PROMOTION:

Captain Edward T. Comegys, Asst. Surg., to be Surg., with the rank of Major, Oct. 26,'93.

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## ITEMS.

**Dr. D. W. Montgomery** has changed his office and residence from 1124 Sutter street to 709 Geary street, San Francisco, Cal.

**Reed & Carnrick.**—The highest awards and medals at the World's Fair were given to Reed & Carnick's Infant Foods and Kumysgen.

**A Too Common Affront to the Profession.**—Under this caption a communication is addressed to our readers (advt. p. xxx) on the question of substitution. This notorious evil is certainly not on the decline, and the communication in question deserves attention.

**Wanted.**—Dr. A. Abrams, of 435 Geary street, San Francisco, wishes to obtain vol. 4 of the catalogue to the library of the Surgeon-General. Also, a complete set of the Index Medicus to date. Dr. Abrams states that he is willing to pay a liberal price for these works if in satisfactory condition.

**International Medical Congress.**—Dr. A. Jacobi, the Chairman of the American National Committee of the International Medical Congress, which was postponed from September 24th, on account of cholera prevailing in Italy, has been notified by the Secretary-General that the Congress will be held at Rome from March 29th to April 5th, 1894. Instructions and documents relating to the journey, etc., are promised for the near future.

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